

# *The* MOST POPULAR HOMES *in* AMERICA

Working Plans and Construction Details  
Exterior Views in Full Colors

Volume  
Two

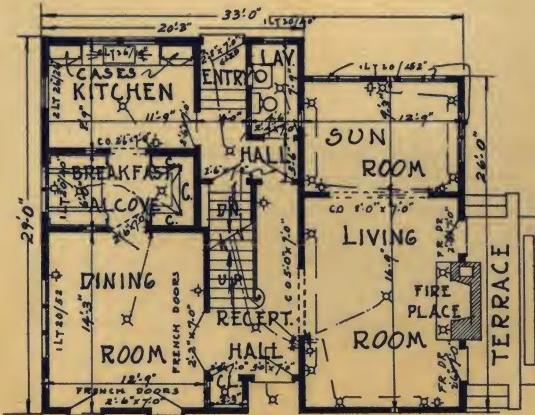


*The*  
WISHING CRYSTAL  
*Reveals Your*  
HEART'S DESIRE

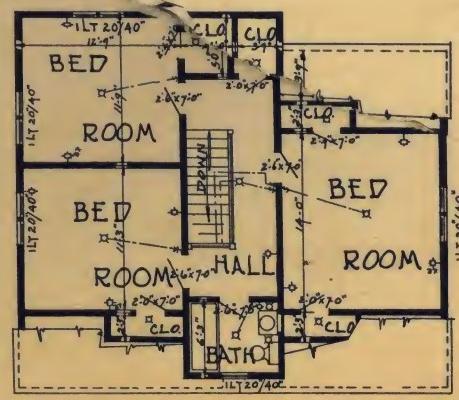


QUIG

## *The PURITAN*



FIRST FLOOR PLAN



SECOND FLOOR PLAN



## THE MOST POPULAR HOMES IN AMERICA VOLUME 2

*Published by American Builder, Chicago*

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## *The ALLGOOD*

OUR Front Cover Home Viewed In The Gazing Globe or Wishing Crystal is a Charming English Design. For Complete Building Plans—Working Drawings to Scale See Pages 6, 7, 8 and 9.



# Our Front Cover Home

## The Allgood

Neat and Compact, This Simple Cottage Includes All the Living Accommodations of a Far More Spacious Dwelling

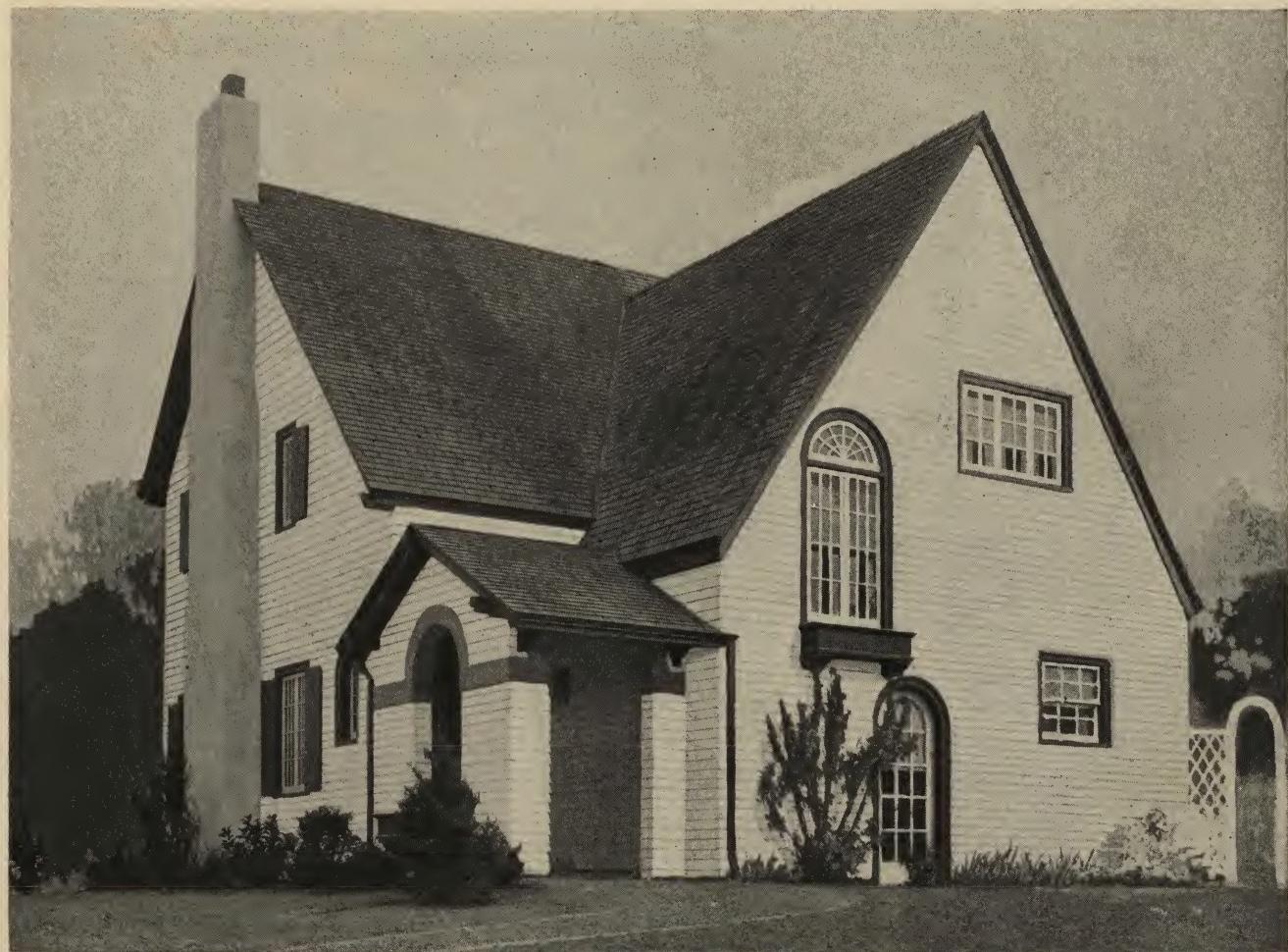
(For perspective in full colors see page 4.)

ONE can hardly speak too highly of the ingenuity of the first floor plan of Our Front Cover Home which, together with other floor plans, elevations and details is reproduced to scale on the pages which follow this. Here we find, in the limited space of a 32-foot square, one of the most complete provisions of living accommodation which could be asked. About the only sort of room not included is a sun room and that might be added without great cost and without detracting from the appearance of the house.

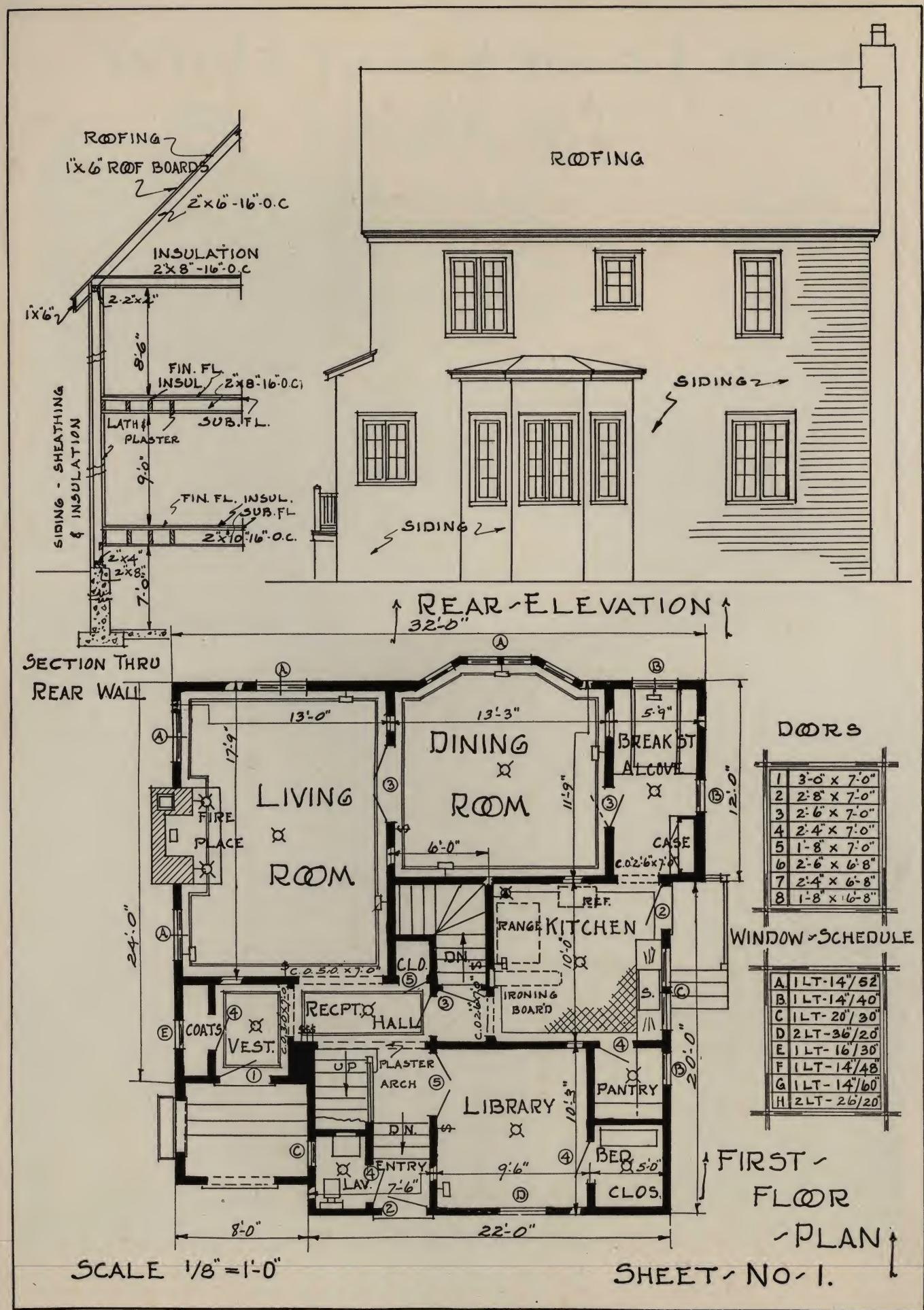
And this brings to mind an interesting feature of this design and one which gives it a wider range of possible use—that is, its adaptability to many variations of exterior treatment. Though in this particular house the builder has chosen to finish the

exterior with clapboards, either shingles, stucco or brick would have been equally appropriate. So, too, might the chimney, an important feature of the exterior, have been built of other materials than the stucco which was used. The windows might have been of the casement type or old fashioned shutters might have been used to add their quaint touch.

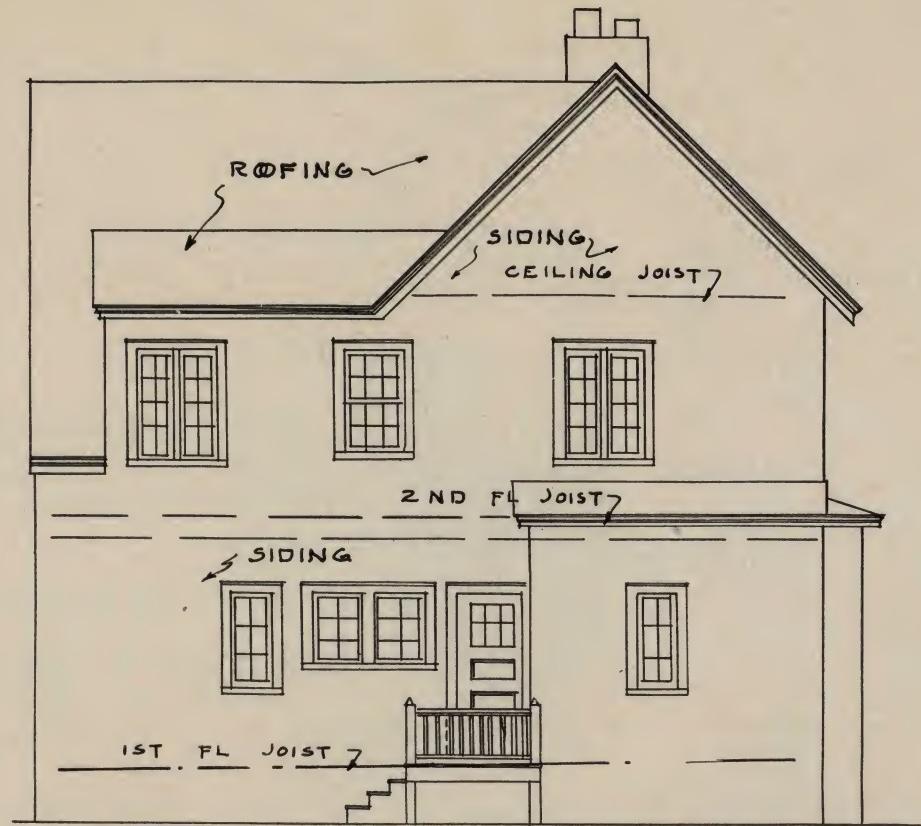
This adaptability is a valuable characteristic, for not infrequently the prospective home owner has quite definite tastes as to the materials for his new home. If these materials do not fit the design he may not realize the fact and when the house is completed be dissatisfied with the result. If he does realize it, he must abandon the design for some other.



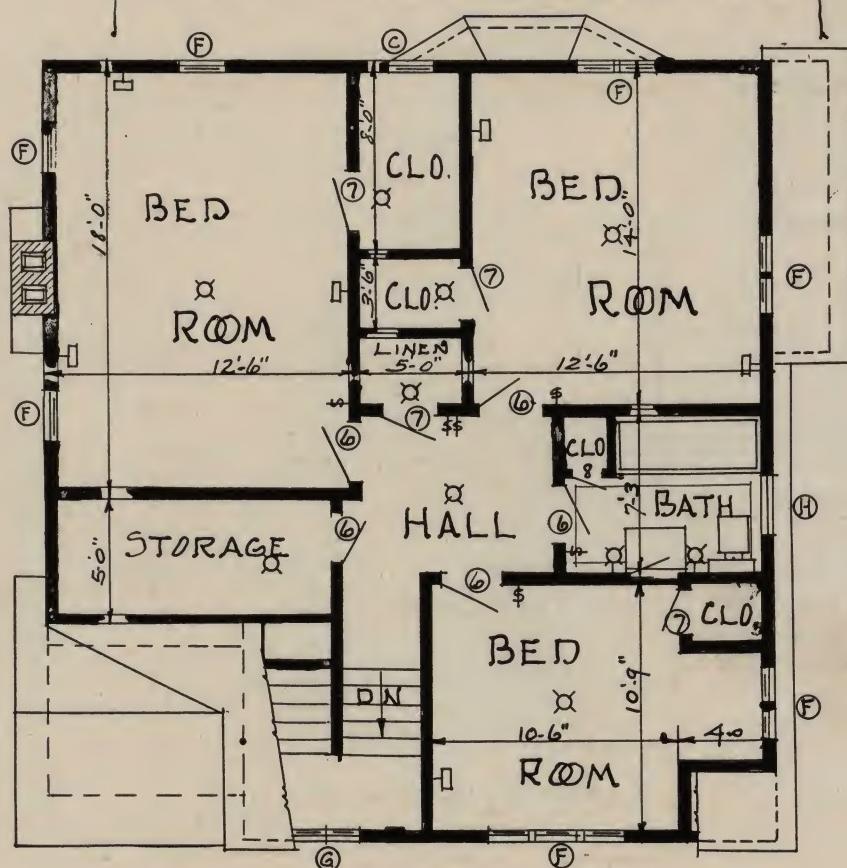
THE ALLGOOD: Here We See How Our Front Cover Dream Home Appears When the Skill of the Builder Has Turned the Dream Into a Reality. On the four pages that follow this will be found the plans which the builder has used, worked out in full detail, to scale.



**THE ALLGOOD:** Surprisingly Complete Accommodations Have Been Provided in the Limited Space Available in Our Front Cover Home and Every Detail Is Complete, from Built-in Fixtures to Roof and Wall Insulation, to Make a Livable House.



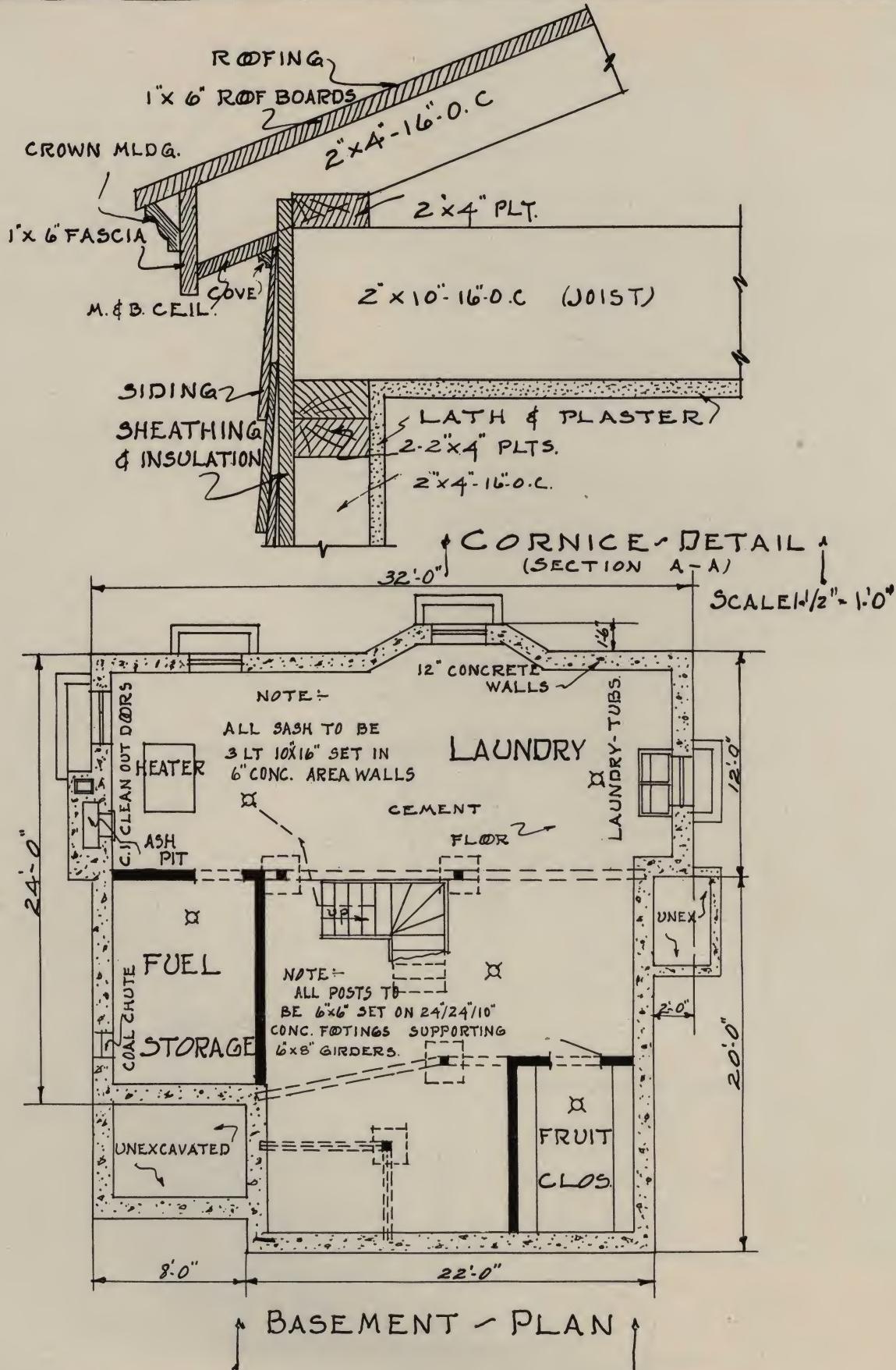
RIGHT - SIDE - ELEVATION



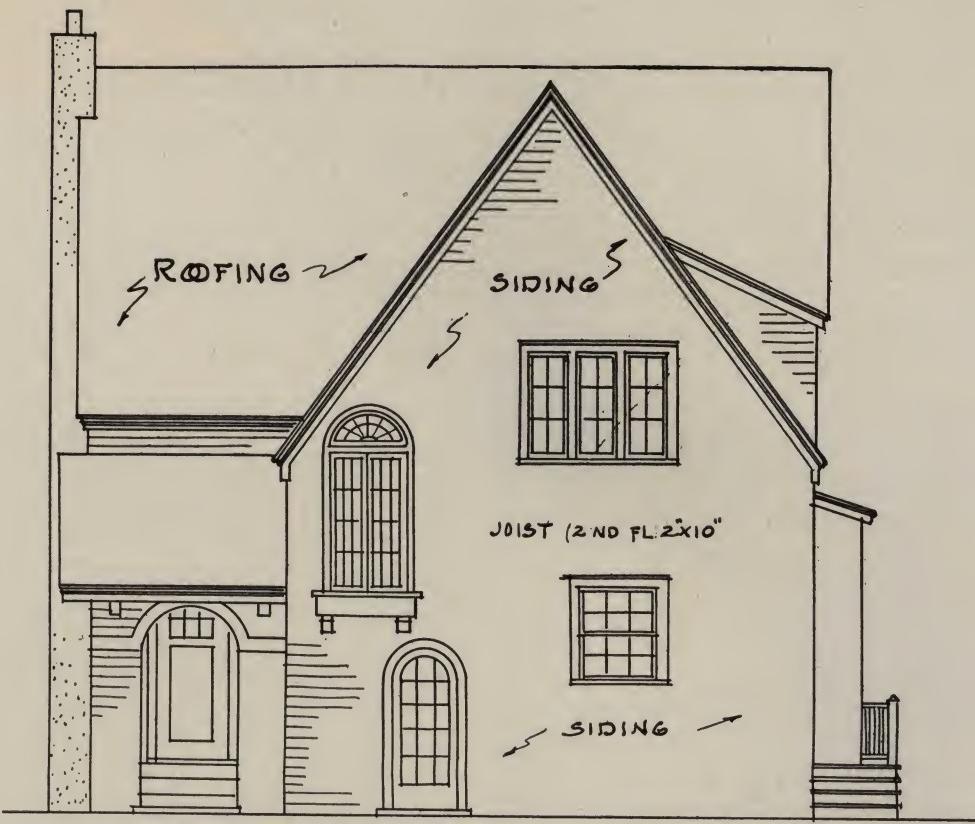
SECOND-FLOOR-PLAN

SCALE 1/8"- 1'-0"

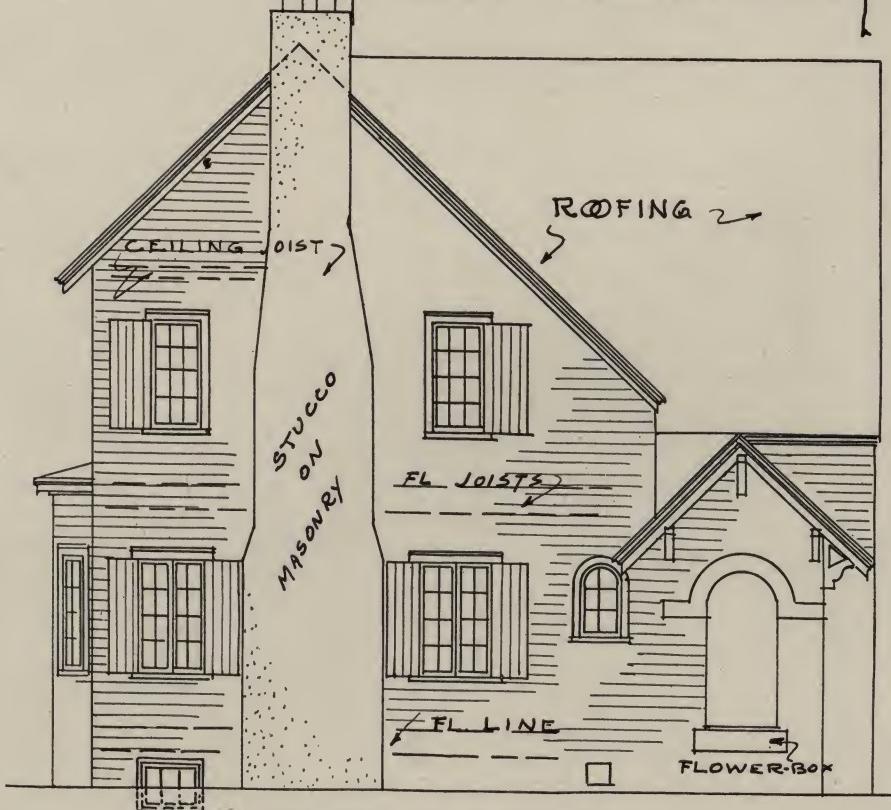
SHEET-NO-2.



THE ALLGOOD: The Basement of Our Front Cover Home Is Fully Excavated and Well Lighted with Area Windows and the Coal Room Is Partitioned to Keep Its Dirt Confined. Above is a cornice detail.



FRONT-ELEVATION



LEFT-SIDE-ELEVATION

SCALE  $\frac{1}{8}$ " = 1'-0"

SHEET NO. 4.

# America—the Land of Comfortable Homes

**Every Year, Homes Are Becoming More Efficient, More Comfortable and Attractive**

IT is fortunate for the building industry that there are so many opinions as to choice in both design and material. We know a gentleman who insisted upon a brick house of Georgian design, but his wife wanted a white wood frame Colonial, so they compromised by getting the white wood frame Colonial. Usually, however, the husband cunningly

contrives to keep his wife interested inside while he appraises the basement and the outside of a house which he contemplates buying. But the outside of a house is a difficult thing to conceal and nowadays the women are certainly looking for appearances. It may be due to them that color and texture have become so prominent in building materials even though the architects claim credit for it.

Instead of the sombre effects of former days, roofs have blossomed out in a bewildering variety of tints. Stained wood shingles are exceedingly popular for both roofing and siding. Asphalt shingles are available in colors; and blended colors in natural slate, clay tile and rigid asbestos are growing in popularity. And now we have the thatched shingle effect in several varieties of roof coverings in imitation of the ancient thatched roofs.

Brick has joined the ranks of the esthetic; it can be had in innumerable warm tints and textures. Common brick has found its texture effect in the method of its laying, called "skintled" brick and with colored mortar joints producing some surprisingly good effects.

Dutch Colonial designs have been enjoying an unusual vogue—perhaps because this style lends itself to small, as well as large, house designs and economies on lumber by eliminating the attic. Strange to say, while smaller houses are in demand, very small rooms have been eliminated in all but diminutive bungalows and cottages. The seven-room house of today usually has a living room of generous proportions with a sun room adjacent, adding to the impression of size and vista. While Colonial architecture is still



The Modern Sun Room Is a Pleasing Place in Summer or Winter. Note the large size radiator at the end of this sun porch.



A Very Attractive Dutch Colonial Design with Living Porch at the End. Note the doorway leading to porch deck with electric light along side.

our main inspiration, there are evidences of a swing in public taste towards designs of the English type.

Those who have found recollections of pleasant summer nights on verandas—mixed, perhaps, with romantic recollections—will regret the passing of the veranda. The sun room has taken its place—a room for winter, as well as summer use—the sash well weatherstripped in winter and equipped with screens in summer. Lighted, heated and furnished, it is a bright, cheery spot in winter and easily thrown open to the cooling breezes when summer comes around. Even the family hearth, in some houses, has been moved to the sun room.

In modern designs, dining rooms are quite frequently placed at the front of the house sharing with the living room, in equal degree, the honors of entertainment. An entirely new room is appearing on many house



This Very Complete Sun Porch Has a Fireplace for Fall and Winter Use and is Comfortably Furnished with Porch Swing, Easy Chairs, Floor Lamps, Etc.



This Dining Room Has a Modern Atmosphere Which Sometimes Goes with Antique Furniture. The double French doors form an attractive entrance.

plans—the radio room—usually installed as an alcove to living room, dining room or study. The most favored location is off the living room. Thus, to the other attractions of the modern home, an unlimited range of music and entertainment via the radio is "on tap" day or night.

Both materials and designs have been modernized. Wood, brick, stone and stucco are even more generally used now than in the days of Caesar. While not in itself new, stucco today presents a wide range of new effects in color, texture, pebble-dash or sparkling minerals. It is often used in combination with other materials, as when the lower floor is stuccoed and the upper floor sided with shingles of stained wood or asphalt with mineral surfacing. The asphalt shingle, by the way, is also an adaptation of an ancient material. When Pharaoh's daughter found Moses in the bulrushes, the basket in which he was floating is said to have been waterproofed with asphalt, and the mummies of



Brick Bungalow of the City Type Usually on Lots with Just Enough Room for Grass, Shrubbery and Flowers. The millwork is noticeable and attractive, especially the group of small windows across the front.



This Bedroom Is of a Size Associated with a Large House. Note the low radiator under the window with cover which forms a window seat. Also the full length mirror in the closet door. Portraits of children at various ages adorn the walls. Egyptian kings lie in our museums today swathed in asphalt and linen.

Machine molded concrete masonry products have been brought to a high state of perfection in recent years even though poured concrete dates back to the days of the old Roman aqueduct.

A new type of concrete masonry house is making its appearance. This new type of concrete masonry is finer and of better color than was possible with the old methods. It is beautifully molded, dense

and harder than many natural stones. By tooling or the use of special aggregates, the effect of almost any natural stone can be obtained.

There have been changes and improvements in sash, doors and millwork. Casement windows are becoming as popular today—with modern fixtures, however—as they were when Spanish guitars thrummed under them in old Madrid.

Insulation in the walls of a house will certainly make it cooler in summer and warmer in winter,



A Very Complete Modern Bathroom. Note the recess for soap holder and for bath brush. Also the weigh scale, the fine pedestal lavatory and the medicine cabinet which scarcely shows in the picture.



A Fine Type of Concrete Masonry House, with Garage and Sleeping Porch in a Rear Wing. Note the casement windows and fine ornamental effects of the plaisance with concrete flower urns. The portico is not quite complete.

with a corresponding saving on the coal pile. The value of insulation is well illustrated in the case of the thermos bottle which will keep coffee hot for a day. House insulation is particularly valuable under the roof or just above the top ceiling, as this is where the biggest heat loss in the winter or gain in the summer takes place. Certainly, good wall insulation is another modern contribution to comfort and economy.

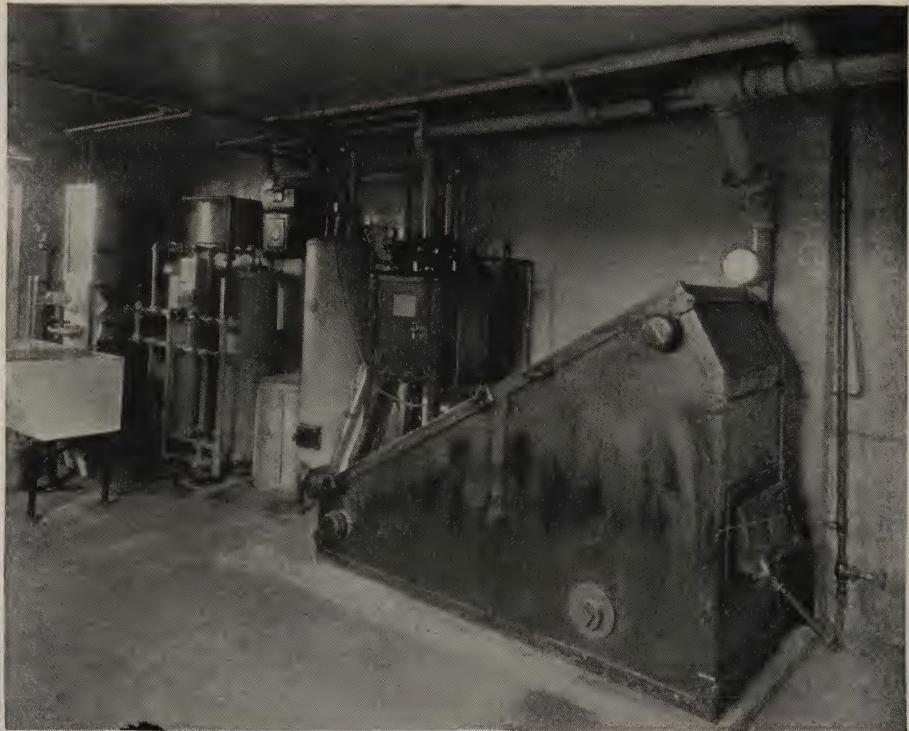
American homes of today are reaching a surprising stage of efficiency with a great gain in comfort and convenience. Father does not have to get up in the dark, early hours of winter to turn on the furnace draft. A thermostat or automatic heat regulator does that for him and the house is comfort-



This Well Lighted Basement Has a Very Completely Equipped Laundry. Here are shown the electric ironing machine as well as the ironing board for a hand electric iron. The laundry gas stove is shown, also the gas-fired clothes dryer.

ably warm when members of the family rise. Maybe, too, the family has been able to afford an oil-burner or a gas-fired furnace or boiler, with their clean, automatic heat. In fact, the basement of the modern home is so clean and dry that a billiard or playroom can be located there. It is a fine place for Jimmy and the boys to play on rainy days instead of staying upstairs and teasing the cat or pulling sister's hair. Steel basement sash will admit plenty of daylight. It will be perfectly safe to store the family heirlooms in any well built modern basement where proper waterproofing materials and methods have been used. Even if flood water backs up through the drain, an automatic cellar draining pump, on guard for that purpose, will eject it.

The feminine portion of the household are thoroughly sold on the conveniences of the modern home—and they are the big sales factor as any real estate agent will tell you.



This Picture Shows the Basement of a Bungalow Equipped with a Hot Water Heating Boiler of Triangular Shape Fired by a Motor Driven Oil Burner. This view also shows the water softening apparatus, the laundry tubs and the insulated domestic water heater and storage, gas fired and automatically controlled.

Hardwood floors and trim, enameled woodwork, tile and linoleum floors are easily kept clean. The scrubbing of the kitchen floor is a domestic rite more honored in the breach than in the observance. Black and blue knees are no longer a necessary part of housekeeping. Outside icing is one form of clean floor insurance. The iceman may have social gifts, but they will not compensate for



The Built-In Ironing Board, Installed as Per Illustration, Is Exceedingly Popular with Most Feminine Home Buyers.



A Truly Delightful Interior—Home of C. W. Ditchy, Architect, Northwood, Mich.; Glenn E. Routier, Builder.

what he brings in on his feet. Nor does it seem to hurt his feeling to provide an outer icing door where he may more quickly deposit his dripping burden. Or, better still, there is the mechanical refrigerator which eliminates the iceman and his bill altogether. There are several types of both the electric and gas fired variety in successful domestic use. The mechanical unit is usually installed in the basement and is automatic in its action; but the refrigerator itself can be placed in kitchen or pantry.

A convenient soiled linen chute will, of course, extend from bedroom floor to basement, going on its modern way to the laundry tubs and the washing machine. The washboard market has suffered a serious decline. Red knuckles among laundresses are no longer in style; in fact, the lady usually arrives in an automobile and is herself a sort of chauffeur of the suds. A gas fired clothes dryer makes the laundry complete and up-to-date.

That boon to every housekeeper—soft water—can be made available in bath, laundry and kitchen with the automatic water softener in the basement. Another boon to the housekeeper and the rest of the household, as well, is the automatic domestic water heater which will turn on the gas whenever the temperature of the water falls below a predetermined point. It is thoroughly insulated for economical hot water storage. A yearning to wash dishes will not be disappointed because someone has taken a bath upstairs. In fact, the ultra-modern house has a mechanical dishwasher. Some are electric, some hydraulic, and, perhaps the latest, is a combination sink and dishwasher. The picture of a housewife elegantly attired, busy at her tasks of housekeeping while sitting in a Morris chair, reading a novel and pushing electric buttons may yet come true.

Woe betide the builder today if he fails to provide convenience outlets in every room. What good is a vacuum sweeper if one has to get down on one's knees and disconnect a floor lamp before being able to plug in with the sweeper connection? Wise builders are providing against this emergency.

The kitchen of the modern house is getting to be a filing cabinet. There is a place for everything and everything should be in that place—a wall cabinet for the ironing board which lets down right under the electric iron connection; a kitchen cabinet—preferably built in—with sugar and spices and cooking devices. Other cabinets for pots and pans flank the cooking range and the sink; the latter placed under a window, which does considerable to lift the shadow for housekeeping.

From a place to be avoided until Saturday night, the bathroom has become the showplace of American homes—glistening in white tile, enamel and porcelain and decorated with nickel or silver plated trimmings. The tub has become a sunken pool into which one can step without vaulting or climbing. If there is not a separate shower cabinet, there is usually one arranged over the tub with rubber curtains. You can take your choice between this and the one which has mirrors flanked all around it. The latter would only be a luxury for some people. A pedestal lavatory is the latest; we don't understand how anyone ever got into Burke's Peerage without it. Even the banker when he is appraising your house for a loan frowns upon any other type of lavatory.

Nor has the lowly toilet seat been neglected; it is as spick and span as any of the other equipment. Both the

forests and the seas have been scoured for improvement material. The bowl no longer finds its support and connection through the floor, but through the wall behind. Flush tanks are disappearing before the rush of the direct flush-valves.

Architects and builders all know that it pays to install good builders' hardware. They are constantly preaching this gospel to home buyers and owners of other classes of buildings. It costs less in the end and gives real satisfaction. It is encouraging to note that there is an increasing demand for the better grade of door knobs, escutcheons, locks, latches and hinges.

More attention is being paid than ever before to wall finish and decoration. Tinted sand float finish or painted rough finish is quite the vogue. Wall papers are still popular, especially for bedrooms, and a woven, waterproof fabric for wall finish has been perfected which provides handsome and durable effects. It can be washed without injury and provides a soft, pleasing finish without gloss in many tints and patterns.

Walnut, birch and gum, as well as oak and mahogany, are being used for finish and paneling. Veneered panels are furnished in many varieties of woods and so made as to prevent cracking, shrinking or warping.

The fireplace is, perhaps, more popular than ever before. It is a genuine contribution to comfort, with modern design and equipment which prevent drafts and smoke. Gas logs and radiant electric effects are installed where owners do not want to build fires. However, the wood and coal grates give genuine comforts, especially to take off the chill of early fall or late spring.

There must be some other explanation than "housing shortage" for the continuing nation-wide demand for new homes. People today are building for perfectly natural reasons—because they *want to build*. More of them want homes than ever before and those who want homes want *better homes*.

With regard to continued home building activity all over the land, perhaps no other explanation is needed than that

homes have been made more attractive. The building industry has sold the American people—with the aid of extensive publicity—on the increased attractiveness of the modern home.



## Defining Rail Steel Bars

**R**AIL steel reinforcing bars for concrete are manufactured from rails removed from the track on account of wear after years of service. This rail steel is a product that originally had to meet the strictest specifications before use and during service in the track.

The upper end of the ingot is discarded to remove impurities before the remainder is rolled into rails. These rails have to withstand the blows of heavy locomotives during the heat of summer and the frost of winter on a yielding or a frozen ballast. After their service in the track they are disposed of to the rail steel industry to be reheated and rolled into various products such as small sections, bars and tubing.

This is the product commonly specified by architects and engineers as specification A-16-14, which is the standard specification of the American Society for Testing Materials.



Insulating the walls of a House Stops the Heat and Makes It Warmer in Winter and Cooler in Summer.

# The Alpha

A Colonial House with a Personality That Pleases and Makes  
a Lasting Impression Upon the Memory

(For perspective in full colors see page 21.)

If ever a house possesses personality, The Alpha does so, in good measure. It is safe to wager that anyone passing along the street would remember it long after its neighbors were forgotten and recall its pleasing appearance with an assured feeling that its owners were the sort of people one would like to know. Just what it is that gives this, or any house, such a personality is hard to define and yet it can be said to be due to a perfectly harmonious blending of many details which are pleasing and artistically correct in themselves.

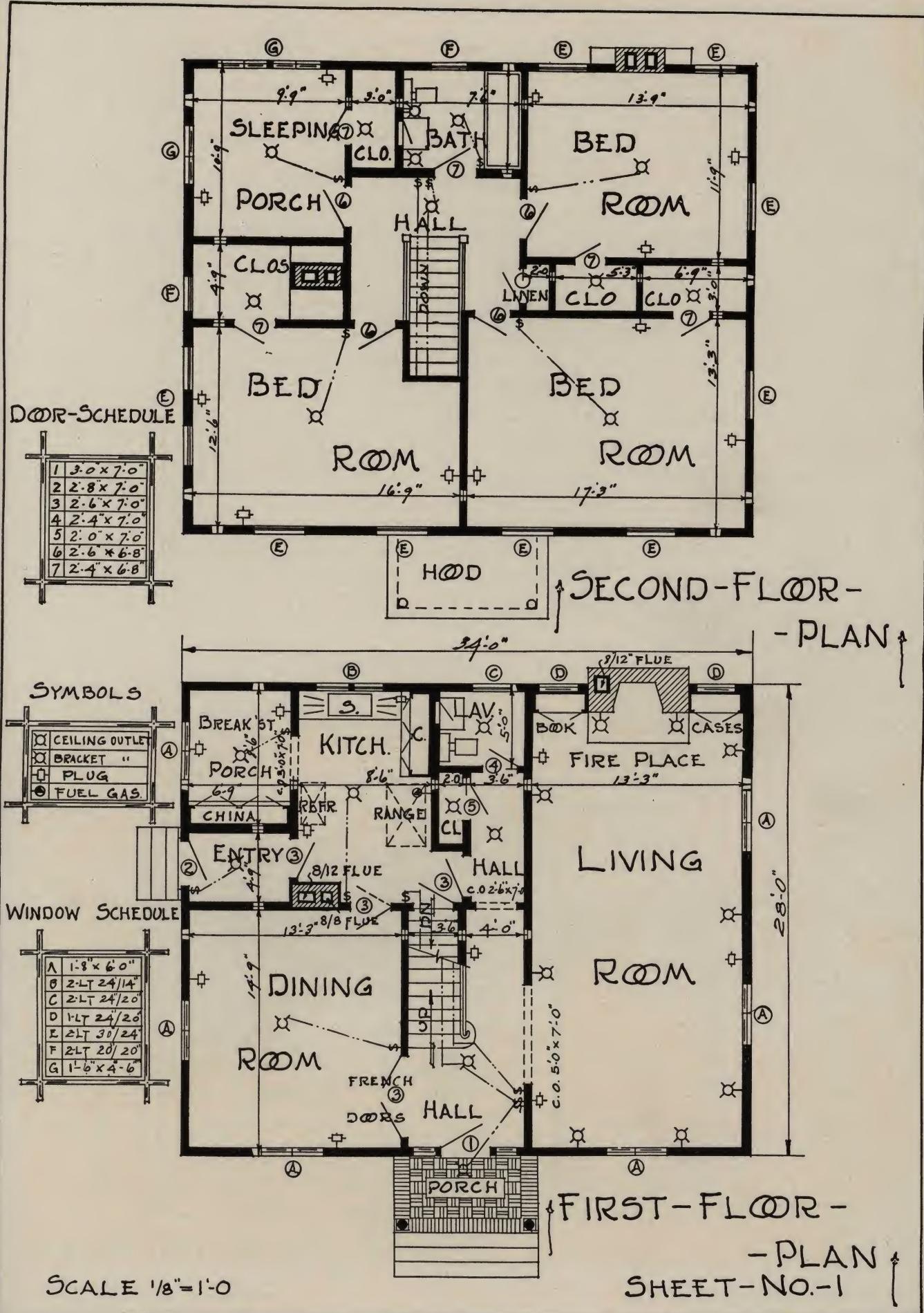
Here is a simple, not to say severe, Colonial house of nearly square outline. But the severity is relieved by the graceful entrance, the charming

shuttered windows and the lattice work with its beautiful vines and shrubbery setting off the building proper. Then, too, the brickwork of the porch and chimney add a brightening touch which is important.

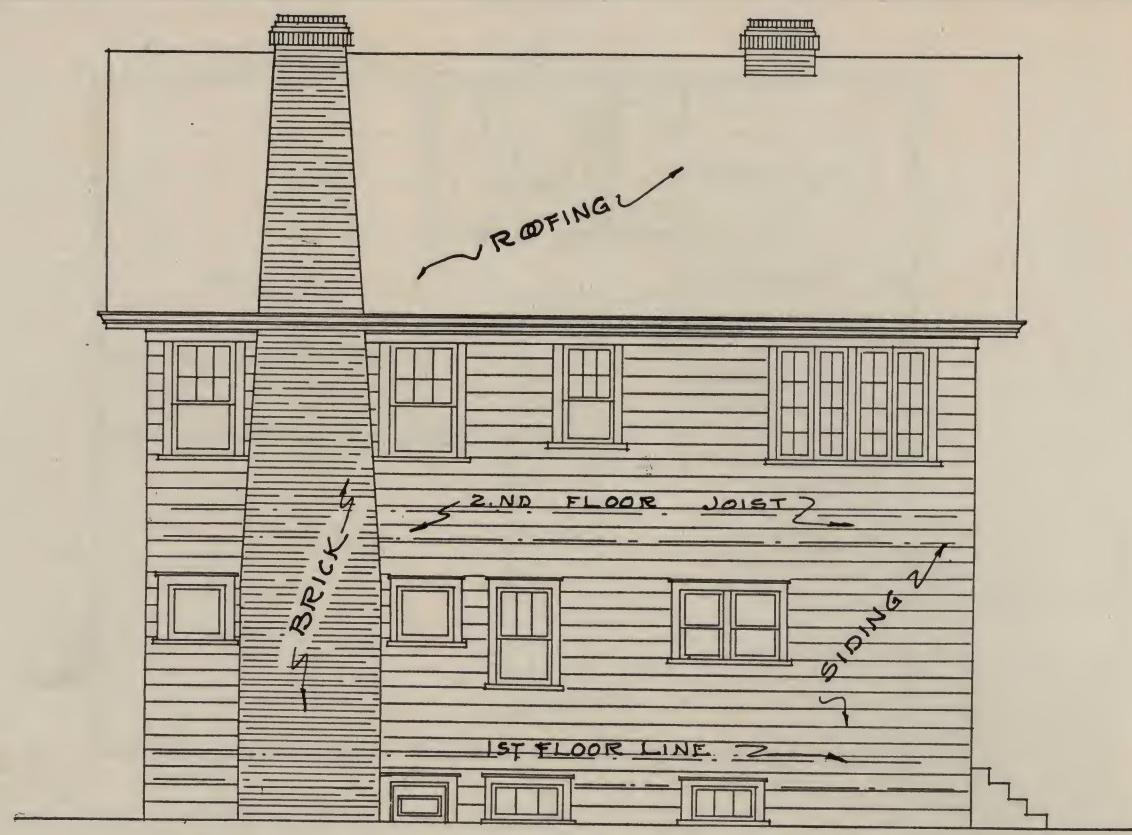
The plans, reproduced on the pages which follow this, show a design well adapted to the requirements of the average American family and providing the many conveniences which go to make what we call a "modern" house. In addition to the second floor bath room there is a lavatory on the first floor and a handy breakfast porch is provided off the kitchen. In the basement are found equipment to reduce the labor of housekeeping.



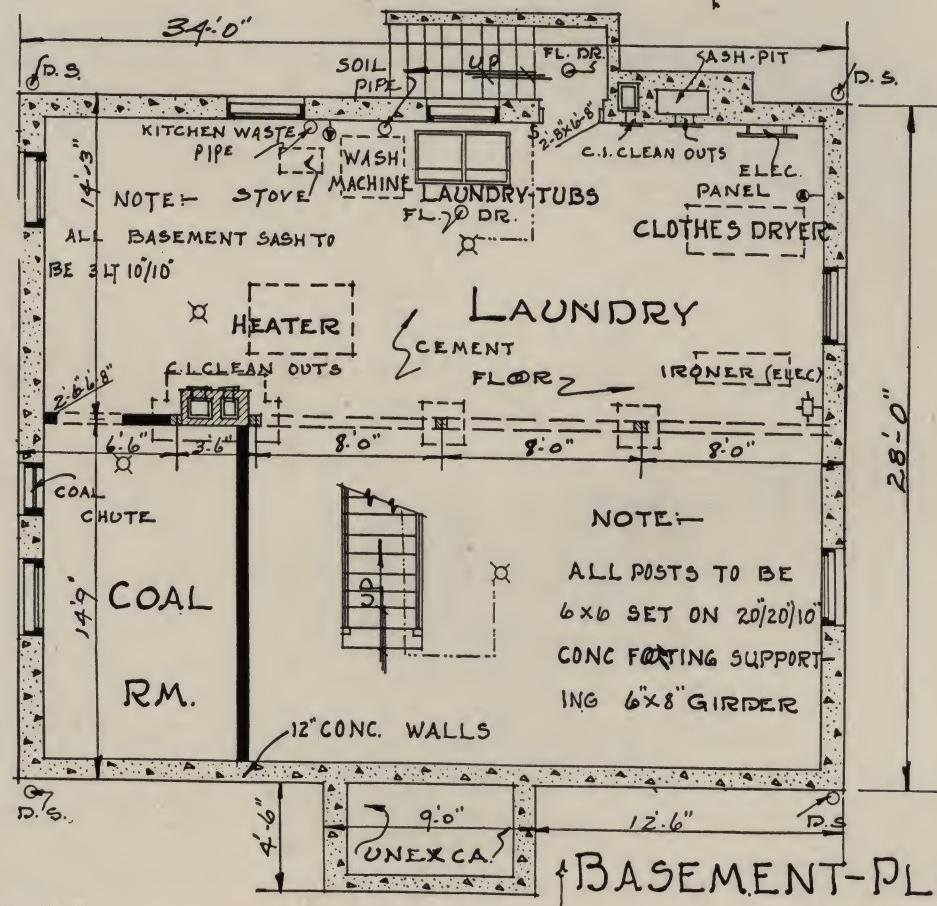
THE ALPHA: The Severity of Its Colonial Style Has Been Given a Dignity and Charm Which Are Unforgettable in This Home with Its Graceful Entrance and Well Planned Landscaping. Complete Working Plans are Presented on Pages 17, 18, 19 and 20.



**THE ALPHA:** The Floor Plans of This Home Are Typical of the Modern House at Its Best. For Additional Working Plans See Pages 18, 19 and 20.



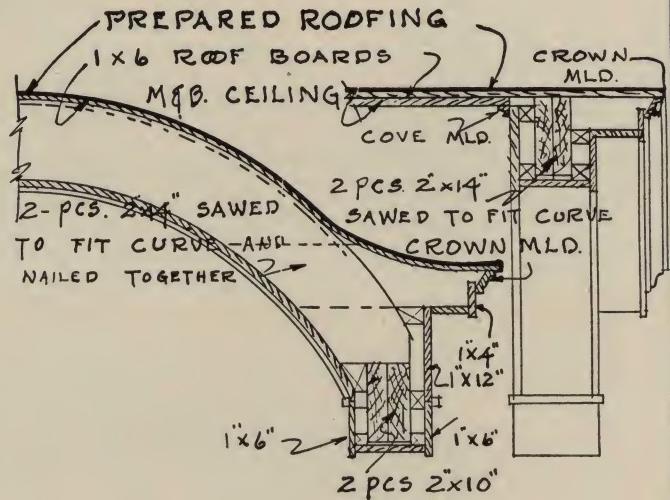
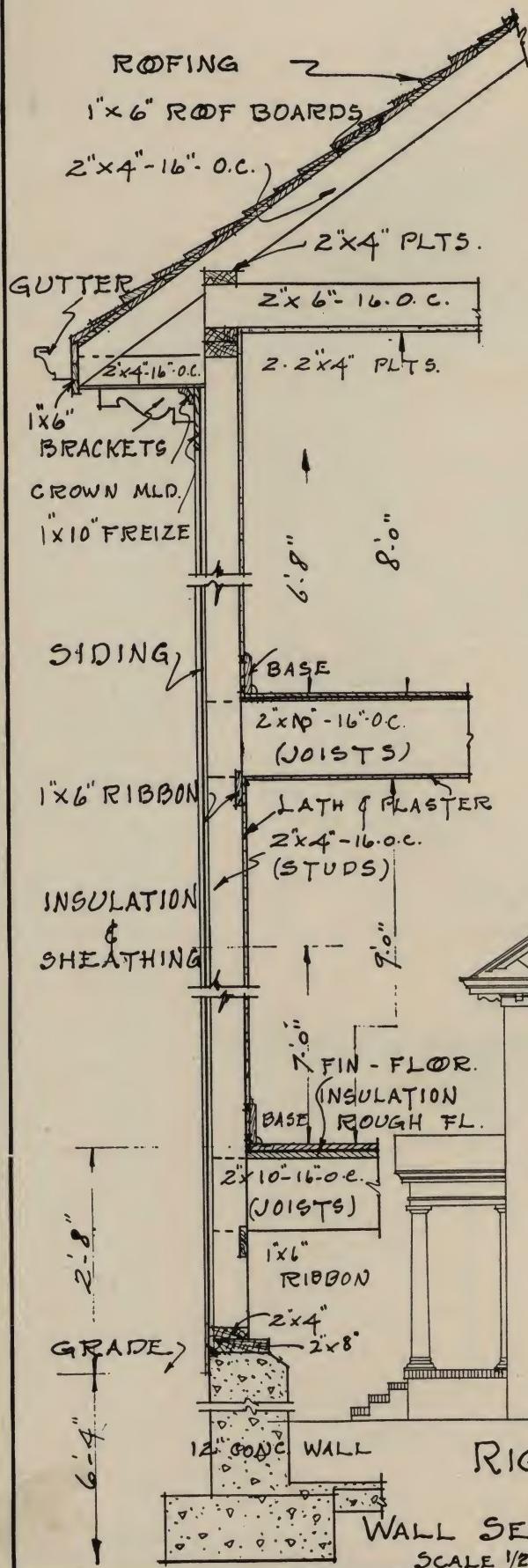
REAR-ELEVATION



SCALE 1/8"-1'-0"

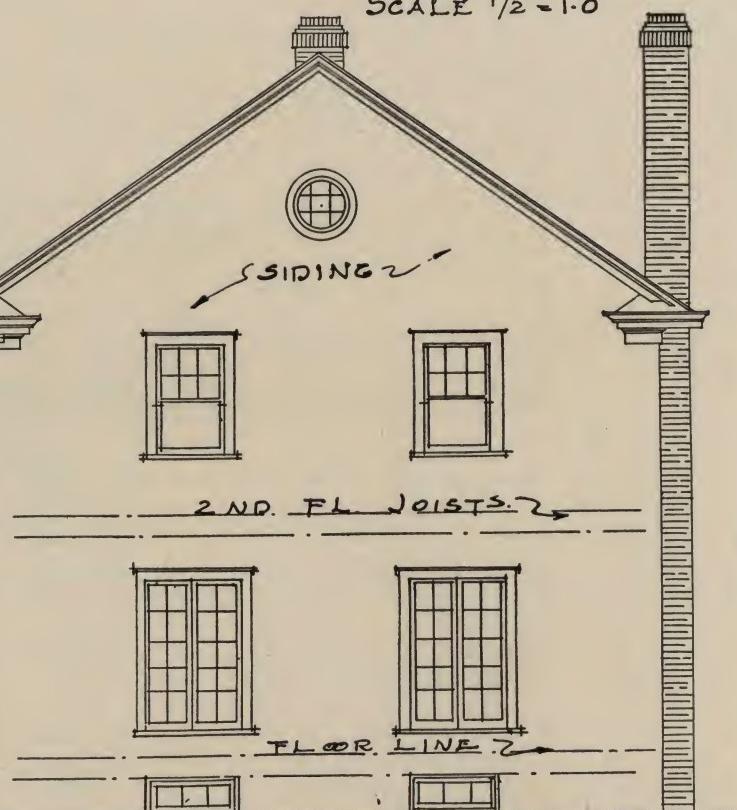
SHEET - NO. - 2.





### DETAIL OF PORCH CORNICE

SCALE 1/2"-1'-0"



SCALE 1/8"-1'-0"

SHEET - NO. - 4.

## *The ALPHA*

A NEW England Colonial Home  
Perfect in Its Details. For  
Complete Building Plans—Working  
Drawings to Scale See Pages 17, 18,  
19 and 20.





## *The OTTAWA*

A N Interesting English House with Attached Garage. For Complete Building Plans—Working Drawings to Scale See Pages 24, 25, 26 and 27.



# The Ottawa

A Six Room House, Distinctly English in Style Which Incorporates a Number of Unusual Features in Its Design

(For perspective in full colors see page 22.)

**D**ISTINCTLY English, in spite of the modern tone of the two-car garage which forms an integral part of the house, is The Ottawa shown below. It is a stucco house with shingle roof and timbering about the entrance and in the second story front. It is designed with several features which particularly recommend it for its living qualities.

There is a long narrow passage, with a lavatory at one end and a pantry at the other, which effectively separates the garage and kitchen from the living rooms of the lower floor. The garage can be reached through a door from this passage without going outdoors, an item of considerable satisfaction in bad weather. Conveniently located, near the door to the garage, is the lavatory so that one may quickly wash up after working about the car.

The pantry affords a short direct passage from the kitchen to the dining room closed off from both by doors, while a door also shuts it off from the hall. The dining room and living room are large and the latter is particularly well lighted.

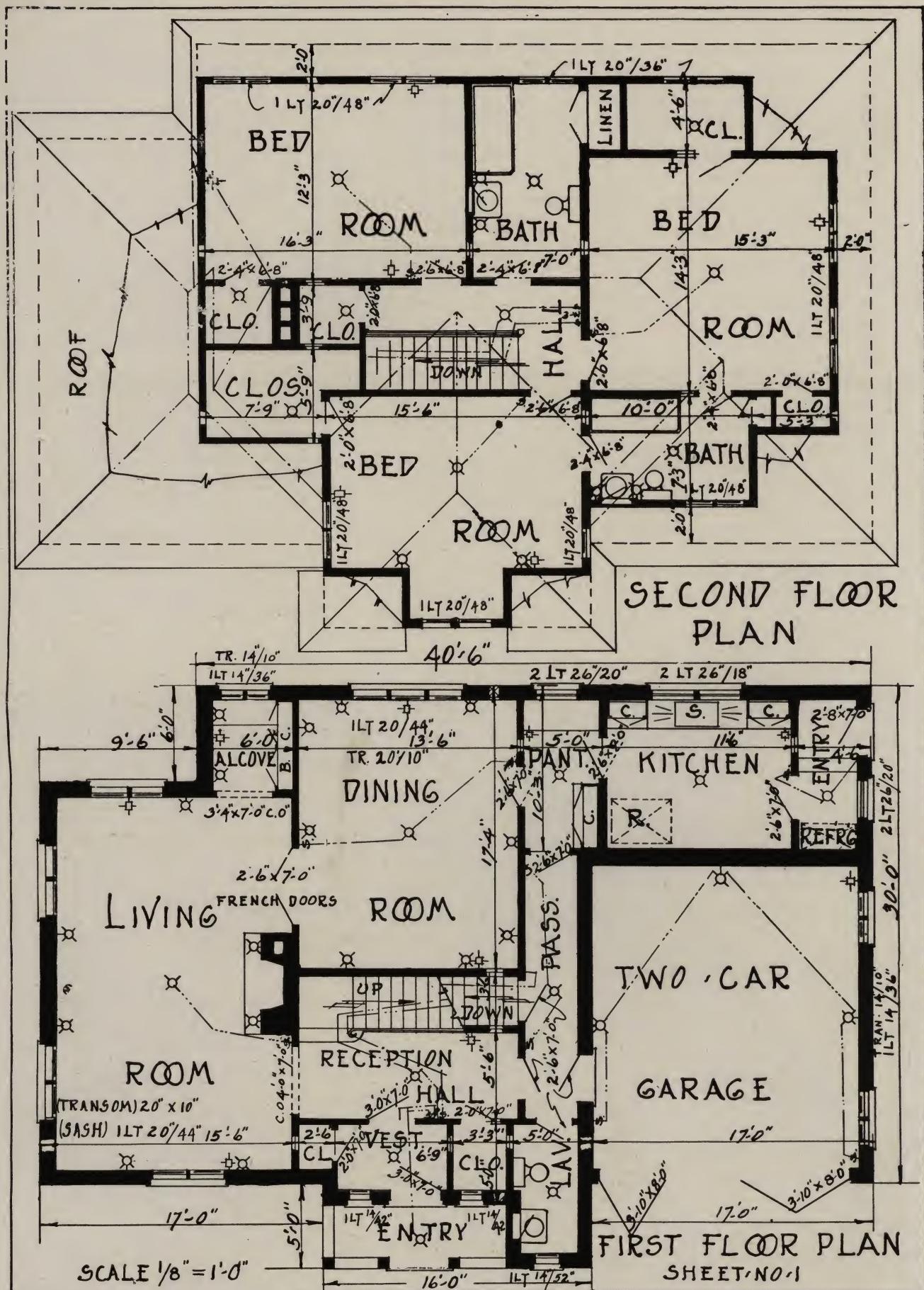
The windows of this, and all the first floor rooms, are an interesting departure from the usual practice. The lower three-quarters of the window space is fitted casement windows while above is a small transom which provides an effective and desirable means of ventilation.

There is a large fireplace in the living room and also a cosy alcove, with a built-in bookcase, which invites one to settle down on a rainy evening and enjoy the company of a good book.

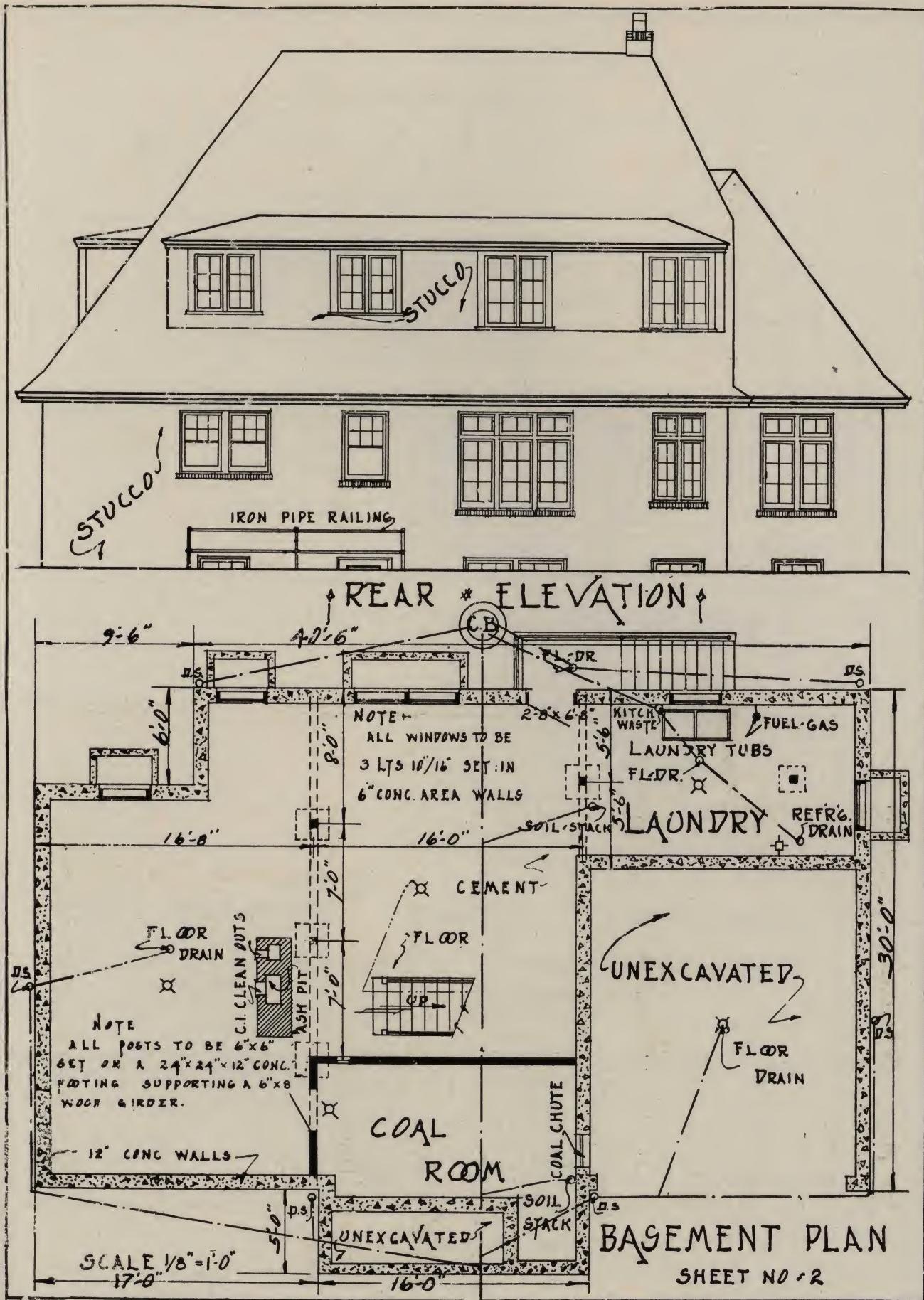
While the second floor does not present such unusual features it is well arranged and affords a remarkable amount of closet space. There are three bedrooms and two baths. One of the baths is reached from the stair hall while the other has two doors, one from the front bedroom and one from the side bedroom. A linen closet is placed in the first bathroom and there is another closet in the hall. Each bedroom has one large closet and the side bedroom has a small one as well. The windows of the second floor are all of the casement type.



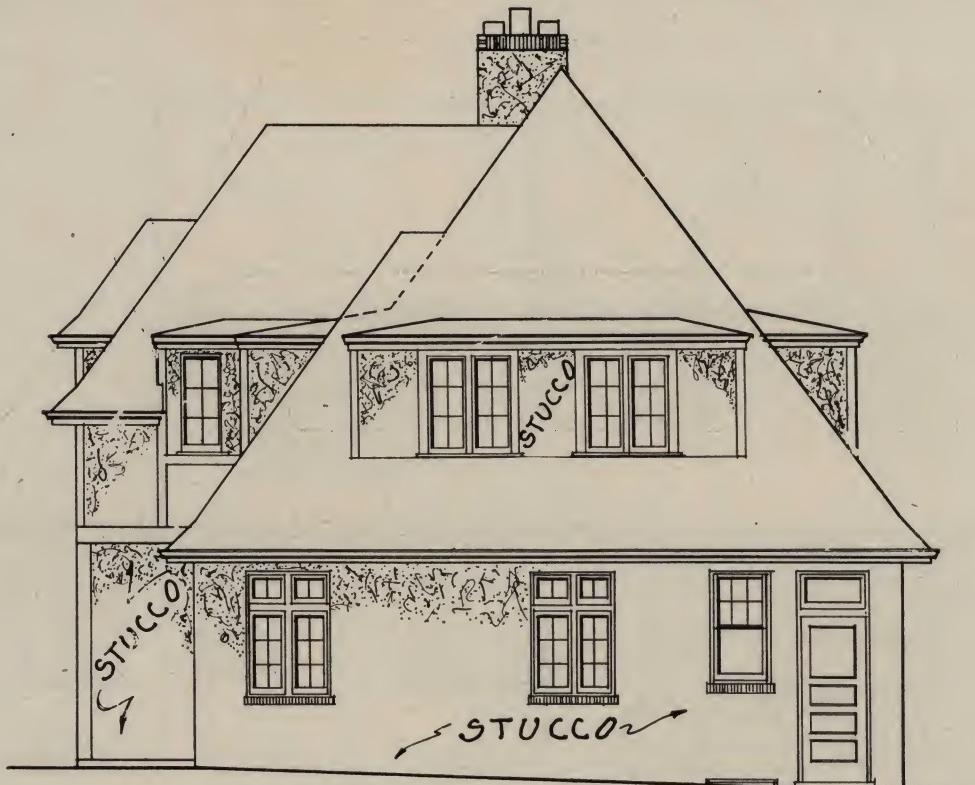
THE OTTAWA: The English Style House Which Makes Its Appearance above Presents a Most Interesting Floor Plan Which, Together with the Elevations and Details, Will Be Found on the Four Pages Following.



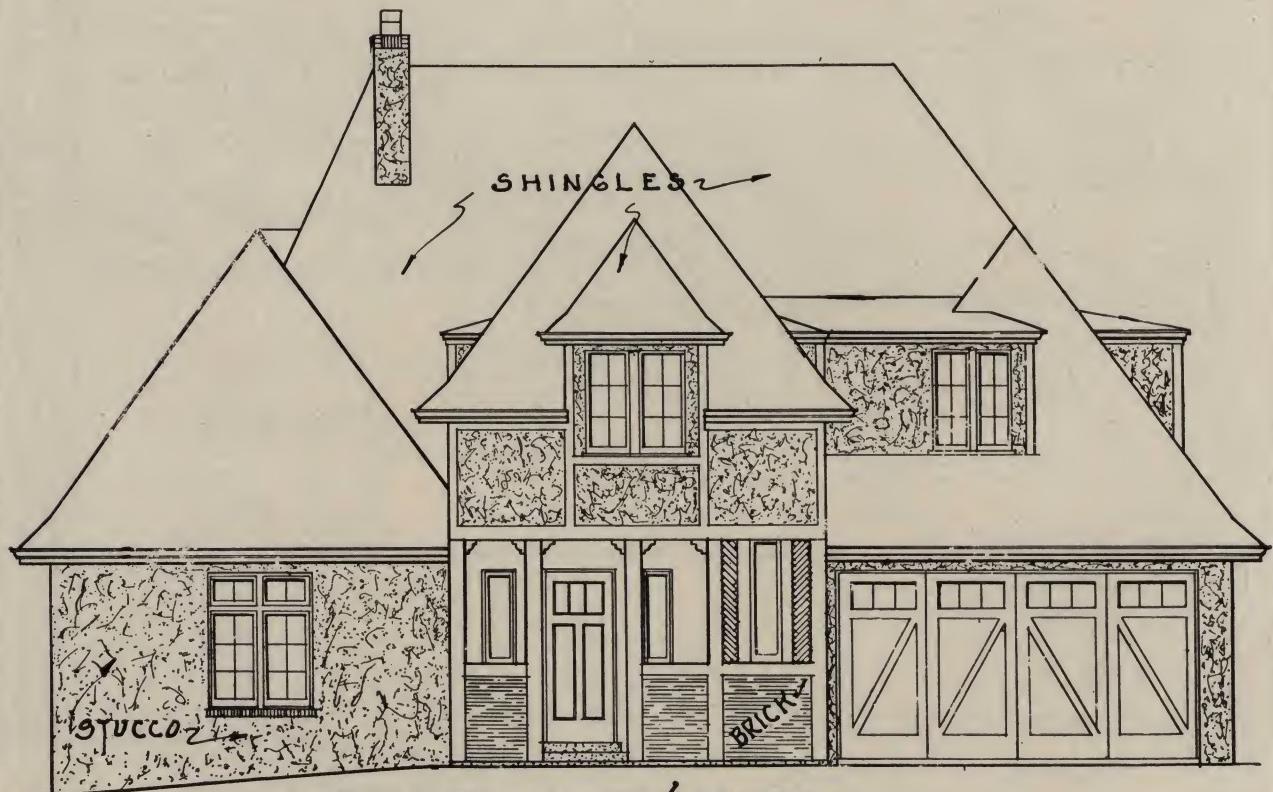
**THE OTTAWA:** The First and Second Floor Plans Show an Interesting and Highly Satisfactory Arrangement of Rooms While on the Opposite Page the Basement Plan and Rear Elevation Display Other Good Features.



**THE OTTAWA:** Here We Find a Basement in Which Care Has Been Taken to Keep All Dirt from the Heating Plant and Coal Room Away from the Laundry. On the next two pages will be found other elevations and construction details.



\* RIGHT \* SIDE \* ELEVATION \*

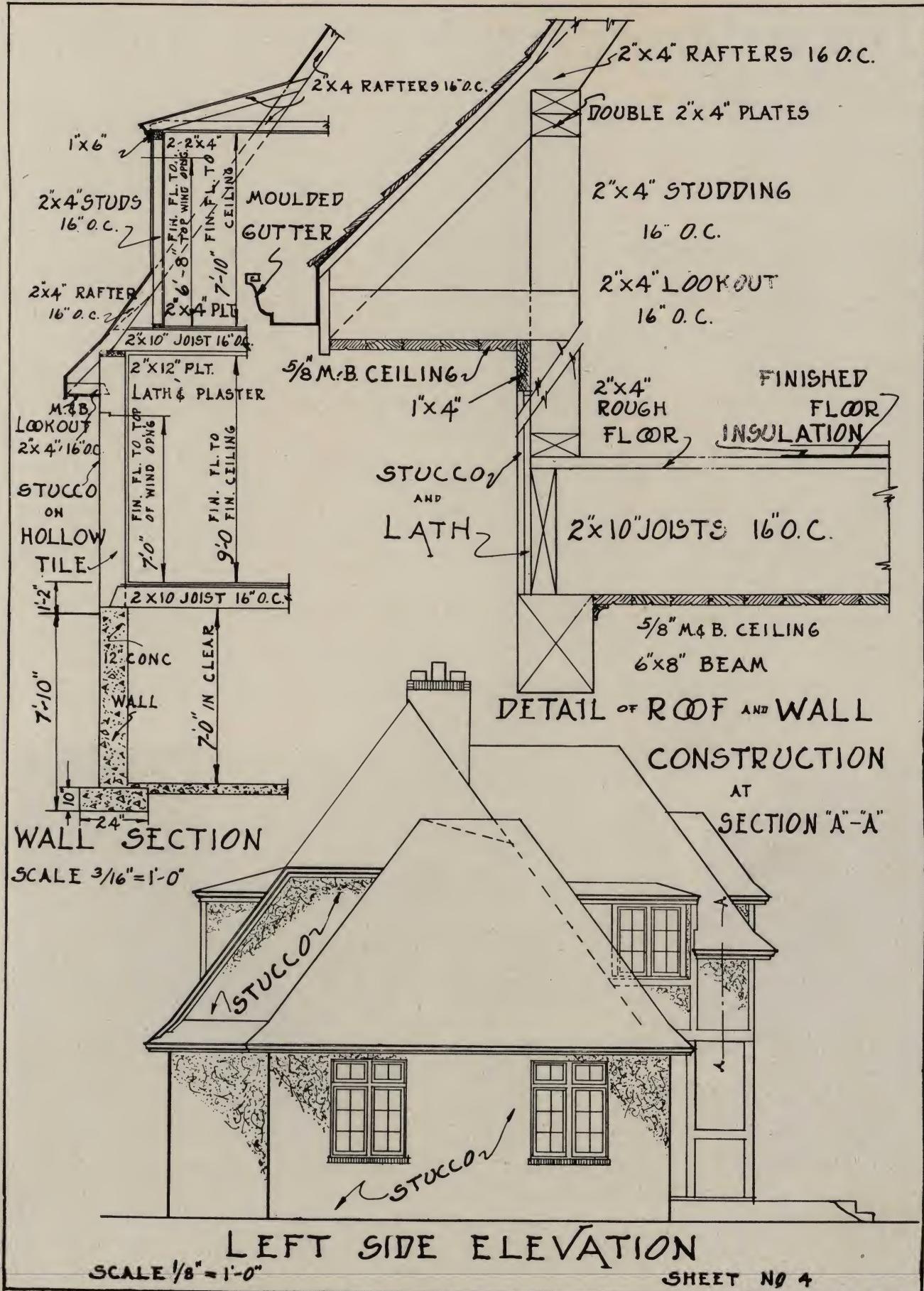


\* FRONT \* ELEVATION \*

SCALE  $\frac{1}{8}$ " = 1'-0"

SHEET NO. - 3

THE OTTAWA: The Front and Right Side Elevations Showing the Window Treatment Which is Carried Out in the Garage as Well as in the Other First Floor Rooms.



# Hardy Plants for Northern Homes

**T**O the present popular motto, "A house is not a home until it is planted," some of us would like to add, "until it is planted with hardy material." The mere fact that in a catalog the shrubs, trees, and flowers are cleverly displayed in color, or the description and photograph of some unusual plant specimen might appeal to you, does not make that plant or tree a usable variety to buy.

Hardiness is a term which is much misunderstood, and much misused. To the writer the plant is not hardy unless it will thrive under the climatic conditions of the locality in which it is to be planted. The temperatures of New England are just as severe as those of northern Minnesota, yet the rhododendron and the azalea will thrive in New England but not in Minnesota. Thus we can see that the soil conditions, moisture conditions, as well as the temperature changes, make for the hardiness or lack of hardiness of the variety of shrub which we would like to grow. Shade and sunlight have also much to do with the success of the plant growth, as do winds and rain, sleet and hail. The shrub which may grow well in the summer season, but which dies back to the ground each severe winter and thus requires protection, is not a hardy shrub.

The more severe the climatic conditions the more carefully must we plant the shrubs, the more carefully prepare the planting areas, and properly mulch and protect the plants.

The home owner who must by force of circumstances build his home in the northern states, away from the tempering effects of the Great Lakes, need not thereby be deprived of the joys of having attractive home grounds. His family deserve the same pleasures, perhaps in a greater degree, afforded all of us who own our homes, and who delight in the development of the plants making up the setting for this ideal home. By careful selection of varieties, by deep and well-prepared soil, by pruning, by a windbreak of tall trees where the winds are severe, by cultivation and above all by patient effort a correct and pleasing result can eventually be secured.

To make the suggestions more practical, we are selecting as a home a Dutch Colonial type with well planted grounds.

This eliminates much uncertainty which usually precedes the building of a home. We have prior to developing the plan for the house, decided upon a location, or a lot which seems to be in the right neighborhood, in a close proximity to our business. We are to have a car, also, so that a garage is an essential element in our planning of the grounds.

If we have been trying to decide between a house site on a knoll or hilltop, and one in the valley, do not decide too quickly upon the hilltop location. While in summer the breezes cool the living room, yet in winter the bleak snow storms bring all of their howling force to bear upon the house as it perches upon the peak of the hill. If such an unprotected area is the only one available, then plant a hedge row of evergreens or other tall trees to break the force of the gale, between the house and the direction from which the prevailing winds come.

Usually a building site part way down a hillside rather than either in the valley bottom or on the hilltop will be best. In the bottom lands, the drifts settle, and the damp pockets of early fog and mist hover for many hours in the early morning hours, before the sun breaks through the clouds.

On a corner lot, which is the type which we have chosen for our new home, more variety is possible in the placing and orientation of the house. Thus in this case the long dimension of the house should run the long way of the lot. Every subdivision would naturally have certain restrictions as to the set-back of the house from the street, but its adaptation to the sides and to the size of the lot is a matter for the architect and the owner to decide for themselves. The lines of this Dutch Colonial house seem to call for the arrangement selected with the two porches, one at either end, and the long sweeping lines of the roof, which in turn seem to help in tying the building to the ground.

The plan of the house has been decided upon with a lot fronting toward the north in mind, so that the dining room windows open toward the east. Our living room is thus toward the west, and our garden protected from the north winds and from the inquiring eyes of the passing public by



The House Which Is a Home Is Surrounded with Plantings of Trees, Shrubs and Flowers and These Should Be Selected with Reference to Their Hardiness in Relation to the Climate in Which the Home Is Built.

a heavy strip of planting of trees and shrubs just outside of the hedge enclosure. Within the garden a quaint old sundial graces the center turf panel, with the flowers about the borders inside of the hedge, and a pergola with seats of comfort at the end of the garden, all backed by tall pyramidal poplars or fine maples for shade and protection.

The vegetable garden and the small orchard take up much space in the back yard, just to the rear of the garage, which for convenience is located near to the house and to the back door. The service area for a drying yard is again just outside of the laundry back entry.

At the south end of the lot, viewed underneath the rose-covered arch in the garden hedge, we catch a glimpse of the shelter and seats across a small pool or lake. The lake is fed by means of an artificial spring which bubbles up from among the stones of a flower bedecked rockery near the orchard edge. In the quiet pool the fish dart to and fro and the idly floating water lilies give grace and color to the green waters. Tea can be served beneath the big willow which covers over the shelter, and in the pool the children can paddle about to their hearts content.

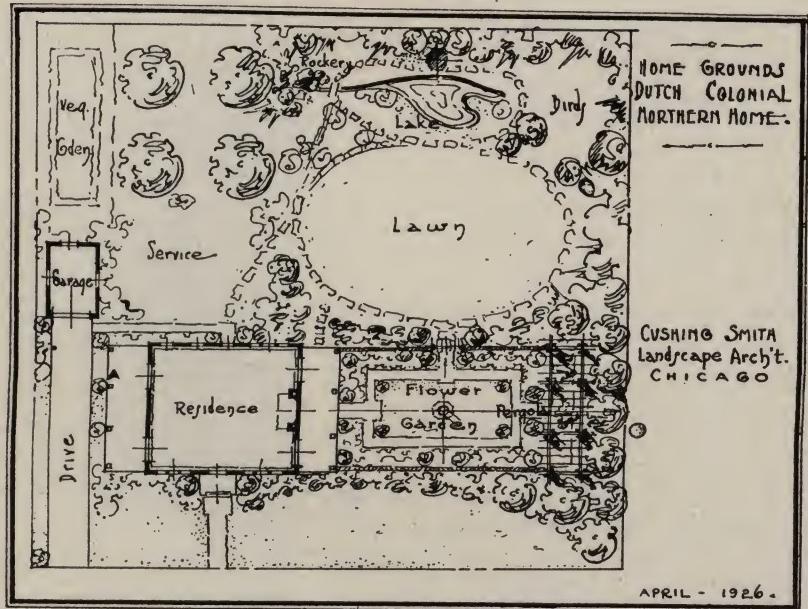
Just off the edge of the lake to the west, is a bird sanctuary, where I would have you plant the shrubs, trees and vines whose fruits would attract the feathered songsters. If you have a fine lot of raspberries in your garden, and would protect them from the ravages of the birds, plant the wild fruited shrubs and trees, and provide bird baths, or a shallow end to your pool, and they will not bother your prized berries.

The tendency of extreme cold upon most plants is to dwarf them, or to stunt their growth, giving at times in the case of trees a grotesque outline of gnarled, twisted and bent branches. The shrubs and trees which we can wisely plant under the severe climatic conditions where we are now building can be few in number. Remember that, in spite of friendly suggestions to the contrary, the shrubs which you can successfully plant will be either those which are native to the section, or those which after years of experimentation on the part of others have proven to be hardy.

For use in the hedges either about the outline of the lot, or about the garden, we may safely use the Tartarian honeysuckle (*Lonicera tatarica*), the common buckthorn (*Rhamnus cathartica*), the Alpine currant (*Ribes alpinum*), or the Japanese rose (*Rosa rugosa*). Where soil conditions are not of the best, especially in a stiff clay soil, the latter will not always survive. Among the trees for hedges might be mentioned the red cedar (*Juniperus Virginiana*), the Norway spruce (*Picea excelsa*), the Black Hills spruce (*Picea Canadensis*), the white pine (*Pinus strobus*), the Austrian pine (*Pinus nigra Austriaca*) with its long dark green stiff needles,



A Vine-Covered Pergola at the Far End of the Flower Garden Affords a Semi-Sheltered Retreat for the Warm Summer Days and Adds Much to the Charm of the Garden.



and the Scotch pine (*Pinus sylvestris*) with its irregular gnarled and yellowish branches.

The shrubs upon the balance of the place might safely include the sweet fern (*Comptonia asplenifolia*), which although, rather low in habit, is excellent as facing material in front of the taller varieties. The flowering currant (*Ribes aureum*) may usually be included, as can the wild gooseberry (*Ribes oxyacantha*) and the flowering raspberry (*Rubus odoratus*). Of the spirea family, always a standby, but two of the varieties are suitable under our present conditions of cold, namely, the sorb-leaved spirea, and the hardhack (*Spiraea tomentosa*), and the Indian currant (*Symphoricarpos vulgaris*) will also thrive here.

Vines upon the fences and upon the pergola, or over the sun-dial in our garden will be practically all native material, the bitter-sweet (*Celastrus scandens*), the matrimony vine (*Lycium halimifolium*), and the Virginia creeper (*Ampelopsis quinquefolia*).

About the bird-garden, beside the lake, I would like to see an old willow tree shading the playhouse, with its pendulous branches swaying in the wind. The shrubs which would mean much to the life of our songsters would be the chokeberry (*Aronia*), the barberries in variety, the dogwood, the elderberries brought from the fence row, and among the trees, the mulberry, and all varieties of the cherry and of the plum.

Without the perennials in the flower garden, it would probably not seem like home to many of us. It is true, however, that we may need to fill in the bare spaces with annuals, grown under glass during the early spring, to insure bloom during the entire season. Late frosts in the spring may nip some of these plants, and the early frosts of fall may make the blooming season comparatively short.

For the northern states in general the spring planting season is the best. Winters are so long, and the fall season so short, that if a summer has been dry, the plants will be winter-killed, if set out in the fall. Deep cultivation, plenty of water, with plenty of good fertilizer unsparingly applied and deeply spaded into the soil can do wonders for even a somewhat tender plant. When the plants show signs of tenderness, wrap them in the fall with burlap and straw mats. Only thus can they survive the winter and assure us of a large measure of success.

# How Modern Floors Help to Sell the House

**I**N buying a home in America it has become the natural right of the wife to have the final say. The man sizes up the garage. He mentally figures how much room he will have to work around his car. He looks at the driveway and estimates the clearance he will have going in and out. He may be thrilled by the cellar, for the furnace may mean much work or little, and if he is mechanically inclined his workroom will be located "below stairs."

But his wife looks over the house from the standpoint of convenience, the amount of work needed to take care of it, the number of steps from the kitchen to the dining room, the number and size of the clothes closets, the decorations, the possibilities of making the rooms beautiful.

So much attention has of late years been directed to floors that women have come to regard them as part of the decorative scheme of the rooms. Because women have become floor-conscious they hesitate to buy houses if the floors don't satisfy them. The trend towards simplifying the care of the home, and the feminine desire for beauty have combined to popularize linoleum floors.

Years ago linoleum was accepted only in kitchen and bath. It was used in these rooms for reasons that had at least as much to do with practical considerations as with smart appearance. Water splashed in the bathroom was easily wiped up. When the kettle boiled over, or a pan upset, the floor by the kitchen stove was easily made to smile again. In those days choice of patterns was limited. Linoleum was then just a good, easy-to-clean floor.

Then came the leaning to houses arranged on more attractive lines. The all-over carpet and the once-a-year nightmare of spring cleaning passed into history. Floors became more than just something to walk on. The old idea of "soft wood upstairs and hard wood downstairs" gave way to linoleum floors for every room in the house.

Note we say linoleum floors—not floor covering. There's a big difference. The linoleum floor of today is a structural floor. It is literally built in; cemented to builders' heavy deadening felt, which is, in turn, pasted to the wood underfloor. The builders' felt takes up the expansion and contraction of the wood underfloor. As



In the Home of a Philadelphia Architect, the Charming Dignity of the Dining Room Begins with Its Linoleum Floor. The six-inch blocks of black contrast with the rich red-veined marble effect. The border is plain black.

a result linoleum laid this modern way remains a smooth, practically one-piece floor.

It is also a quiet floor, a warm floor. No drafts can get through the combination of heavy felt and linoleum. It is a delightful floor to walk on because linoleum is made largely of cork, springy and noise-deadening. But

the modern linoleum floor appeals to the housewife also as a beautiful floor. In choosing her new home she runs an appraising eye over walls, woodwork, doors and windows—and she also looks at the floors. She is keenly conscious that her job is to make a home out of that house. According to the impression her eye receives she will either want that house or she will do her best to kill the sale. Many builders have found linoleum floors a big factor in "putting over the sale" to the woman who so largely influences the sale.



The Entry of a California Apartment. Approaching the steps, the eye naturally goes to the floor where the linoleum harmonizes with the steps of tapestry brick.

Linoleum floors of color and design immediately suggest to the woman who sees the house for the first time many possibilities for home decoration. She knows that the floor is the room's biggest single area. She wants floors that will be easy to keep looking well, and she has learned that floors of lino-



A Bedroom Needs a Quiet Floor. In this one the linoleum, cemented over heavy deadening felt makes footfalls silent. The cheerful gray Jaspe harmonizes with walls, draperies and furniture. Though unobtrusive it adds a soft charm to the room.

leum are easy to keep spick-and span. She knows that they release the woman who does her own housework from the eternal round of sweeping and scrubbing. She knows, too, that linoleum floors never need refinishing.

There are many other selling points about linoleum floors which the builder can use in putting the sale across. The woman who has small children sees that on this kind of floor little ones may play all day without fear of drafts and resulting colds. Now and then a woman says: "Oh, but I want my pretty rugs!" The answer is that on linoleum floors rugs should be scattered around just as on hardwood. "I wouldn't step out of a warm bed on to that cold floor!" doesn't hold nowadays. By actual test the linoleum floor is a warm floor, for linoleum is non-porous and is a non-conductor of heat and cold.

The way to a woman's heart is through her eye. Linoleum floors help impart a charm she finds it hard to resist, for the variety of patterns and the range of colorings are without limit. Consider the possibilities of the warm red and brown tile patterns in rooms that, facing north, do not get the sun. Again, where the sun floods in during the afternoon, think of the delightfully cooling effects to be had with green or blue tiles, or gray Jaspe.

For kitchen and bath room blue and white tile running at a 45 degree angle to the walls are still popular, but richer patterns may now be had. What housewife wouldn't be captivated by the lovely new moulded tile patterns, blue and gray, two-tone grays, red and buff granite, interlined with white or black?

For bedrooms and living rooms there are many pretty patterns that women like. Figured patterns in soft-colored effects; lovely Jaspes in two-tone grays, buffs, browns, greens and blues, set off by a broad contrasting border of black. Jaspe adds colorful brightness to a room, yet is neutral enough to merge in with any decorative scheme.

For halls and sunparlors there are beautiful inset marble effects, showing rich clouded tones; Spanish tiles in reds, blues and combinations worthy of an old-world cathedral window.

To the practical mind of the builder there naturally comes the question of cost. We have looked into this and we find that the cost of inlaid linoleum, laid the modern way, compares favorably with that of hardwood. Where a linoleum is to be laid the underfloor can be of second grade matched lumber. Any slight unevenness is taken up by the builders' felt.

The saving in lumber costs covers a goodly portion of the cost of linoleum and laying. Properly cared for, the linoleum floor needs no refinishing. We have heard of houses with linoleum floors that have lasted well over thirty-five years. Time has only served to mellow their beauty.



### Watch the Thermometer

MILD autumn weather can build up a false sense of security in the mind of the concrete contractor that may easily prove his undoing. Without warning the mercury can, and often does, drop sharply. The contractor who has freshly placed concrete is in difficulty unless his tarpaulins are in place and his salamanders are ready to fire. Freshly placed concrete hardens more and more slowly as the temperature approaches the freezing point and there it is damaged. It pays to be on guard as the thermometer begins to read in the fifties, forties or thirties.



The Din of the Children's Play is Lessened by this Floor of Inlaid Black and White Tile Linoleum. Tumbles do not result in hard bumps and bruises and the cool pattern offsets the heat of summer sun. This floor will continue to look well in spite of the rough treatment which is inevitable in a play room.

# Plate Glass for Window Glazing and Many Other Purposes

LAST fall the builder of a suburban development on the outskirts of an eastern city finished a group of twenty dwellings. Ten of these were glazed with ordinary window glass and the other ten with plate glass. The ten glazed with plate glass were all rented within a month after they were finished. Three of the ten glazed with ordinary glass are still vacant. The other seven have been rented but at a lower rental than that brought by those glazed with plate glass.

This incident is significant in being typical of many which are calling increasing attention to the importance to builders of an industry which was non-existent in the United States fifty years ago. Until 1880 the history of plate glass manufacture in this country was a chronicle of failure and we were dependent on European countries for what plate glass we did use. But the development of the last fifty years has been rapid and in 1925 the production of plate glass in this country amounted to 117,224,295 square feet, more than double the production for 1921. By far the greatest part of this was used in the building and automobile industries.

The perfect texture of plate glass, its freedom from whorls, bubbles, flaws, affords a clear and undistorted vision. Its thickness makes it, for all practical purposes, a non-conductor of heat, its toughness and elasticity reduce breakage to a negligible factor and its high polish and lustre give it all the beauty of a perfect crystal.

These qualities make plate glass essential for automobiles. A flaw in a windshield which distorts the vision may spell

death to the driver and passengers. Glass which has the strength to withstand heavy impacts is a protection from the danger from flying slivers. The non-conducting quality adds to winter comfort. These same qualities which make plate glass essential for motorists make it highly desirable, if not essential, as a glazing material for building of many types.

The polish and luster of plate glass give an added note of architectural distinction to the forty-story office building, to the hotel or apartment or to the small home. The faultless texture gives unobstructed vision and freedom from eye strain to those who live or work in these structures. The resistance to heat and cold makes possible substantial heating economies. The toughness reduces breakage and resists wind stresses of a hundred miles an hour or more, an essential in the great buildings of our modern cities.

The owners and managers of buildings are finding that plate glass is an essential if they expect good rentals for their offices and apartments and the situation in regard to the owners and builders of residences is much the same. The home buyer or renter has learned that plate glass will add materially to the comfort and attractiveness of his home.

Modern builders are giving more attention to the appearance of the edifices they erect, and the impression they make on prospective buyers than they are to any other feature of the job.

One illustration of this is in the vogue for "picture win-



Plate Glass Windows, with Their Clear Crystal Surfaces and Perfect Vision, Add a Note of Cheerfulness and Architectural Distinction to This Typical Suburban Residence.

dows." These are planned and constructed with considerable skill in order to hit prospects between the eyes when they are looking over a property, and to add to their satisfaction with the dwelling after they have bought it and settled down to live in it.

Picture windows are located in portions of a house that have an outlet towards a good view, such as a particularly favorable spot for observing a sunrise or sunset, or for glimpsing a river, a park, a prettily wooded prospect or a garden.

Naturally the glass that is chosen for such windows is of the clearest and most attractive appearance, for no obstruction in the view can exist without detracting from the effect that is desired. For this reason plate glass is chosen.

The type of glass being chosen there remains the nice question of deciding upon the size of the panes, and the design and setting of the frame. Obviously small panes, or leaded diamond shaped ones are inappropriate in most such instances. Large sheets, sometimes covering the entire extent of a window, are preferable. They give one the impression of being right outdoors in the view, or else produce the illusion of looking not at a view, but at a veritable painted picture. Hence the expression "picture window."

Windows represent the chief use of plate glass about the home, but there are further uses to which it is put because of its absolute transparency and clearness, and its dense structure which makes it impervious to liquids. Owners of fine furniture employ it as covers for tables,



The Windshield Is Glazed with Plate Glass, the Side Window with Ordinary Glass. Here is a striking example of the better vision obtained when plate glass is used.

buffets, dressers and other furniture which has a finely varnished surface, or even to protect scarves and draperies that are laid upon such furniture. It permits the covers or natural beauty of the wood to be seen while preventing scratches, spots from liquids, or other damage and it is all but invisible. Its use on dressing tables is one of the most frequent purposes it is made to serve.

In kitchen and bathroom, where absolute cleanliness and order are to be desired, plate glass is made into shelves. They are easily kept clean. They make objects on the shelves easily visible. And, especially in closets, they offer no obstruction to light rays so that every corner of the cabinet or closet is illuminated when the door is opened.

The sanitary kitchen and pantry are equipped with glass shelves. Door pushes on pantry doors are covered with glass so that the varnish shall not be dirtied or marred through constant handling.

The mirror, as an object in itself, attracts the lover of beauty. Its polished plate glass, backed by silver in order to reflect truly and without distortion anything that is within its field, bespeaks cheer and brightness. Some mirrors actually consist of a simple sheet of plate glass, devoid of frame, but mirrors with frames multiply the beauties of the glass. Frames have designs antique or modern appealing to all tastes.

In addition to the mirror itself there are varied reflections and effects that can be gained by its careful location. Over mantels or console tables, mirrors multiply objects that are placed before them, through reflecting their obverse sides. In this way they make vases of flowers or statuettes doubly effective. Or their place may be chosen so that, as when hung opposite a long hallway or series of rooms, they reveal a vista of charm that adds to the apparent spaciousness of the room in which they are. A mirror that reflects the outdoors from a position opposite a window inspires the beholder almost as much as a finely done painting, and presents a more varied scene. Again mirrors are placed in dim hallways to catch light from open doorways and to throw it back into dark corners.

From the view point of practicality mirrors are indispensable. For shaving and dressing they are found in closet and bathroom doors, the doors of medicine cabinets and on dressing table. Mirrors with all these many uses are only one form of plate glass.



This Plate Glass Window in a Glen Cove, L. I., Residence, Transmits a Perfect View. The frame emphasizes the picturesque effect and the name of "Picture Window" is highly appropriate.

# The Detroit

A Dutch Colonial Modernized to Meet Every Requirement of the Present Day Home Builder, But Retaining the True Colonial Effect

(For perspective in full colors see page 39.)

THE past few years have been marked by a growing interest in and popularity of things Colonial, particularly Colonial architecture. Many people talk freely of Colonial architecture, apparently unaware of the fact that the term is a broad one including several distinct styles. New England Colonial is one thing, Dutch Colonial another and Southern Colonial still another, though all possess certain characteristics in common, expressing the classical influence which dominated the period.

But whatever the type of Colonial architecture adopted by the prospective owner for his new home, it will, if discretion is used in its modernization, afford him a dwelling which will possess a permanent beauty and charm based on sound architectural principles. The modernization, which is essential to living comfort according to present day standards, must be handled with discretion however,

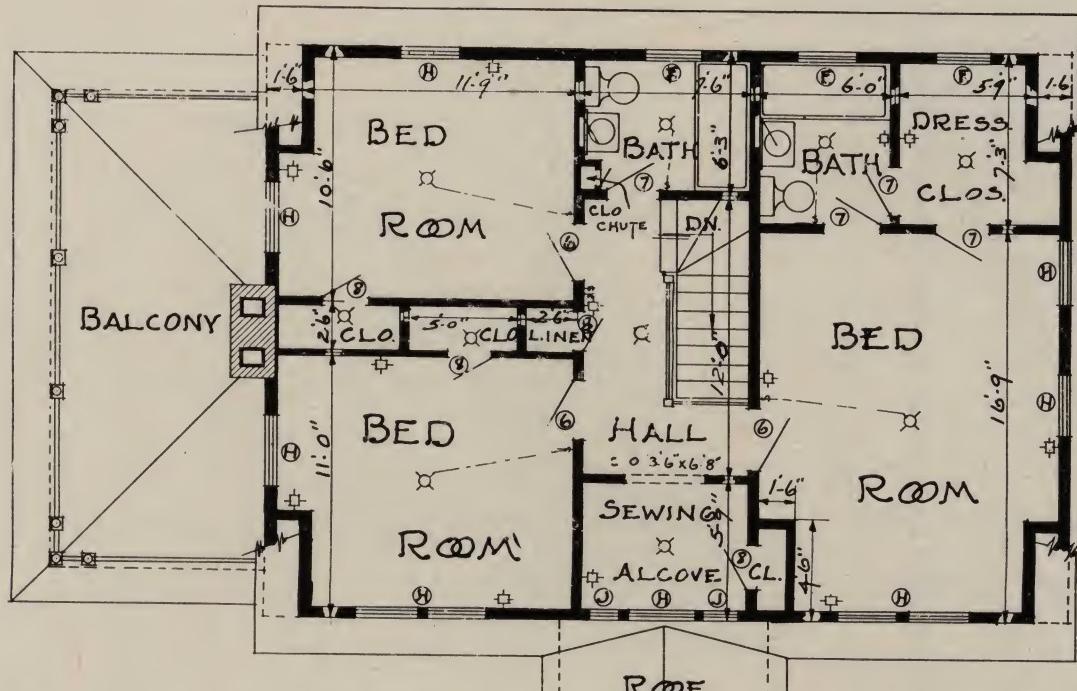
for the simplicity of the true Colonial is easily marred by an inharmonious sun porch or garage or an uninformed selection of trim or decoration.

A sun porch is quite generally considered essential to the modern house and the designer of The Detroit has most successfully accomplished this addition to the Dutch Colonial residence. The house, then, presents a highly satisfactory appearance and one which will preserve its charm through the passing years regardless of changing styles of less substantial origin.

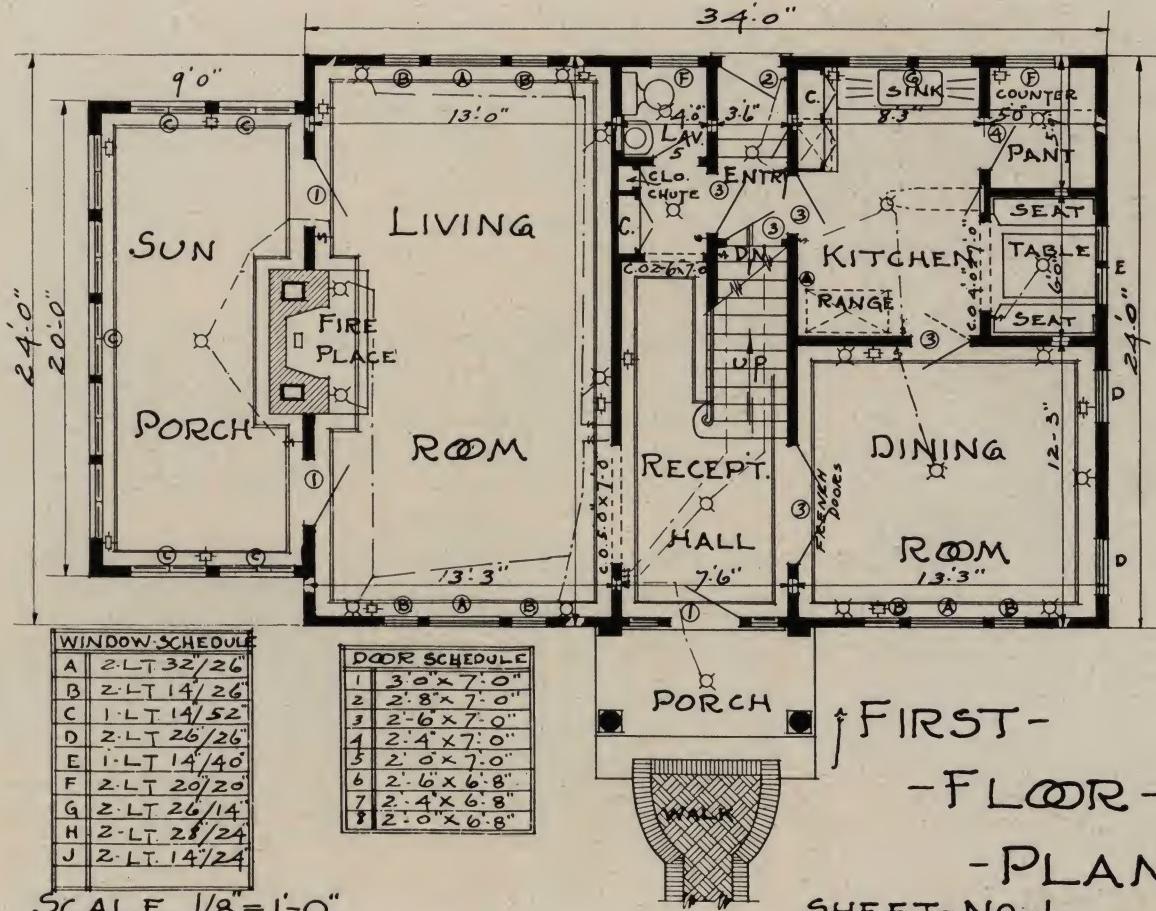
This sun porch is a completely enclosed addition to the large living room which extends across one end of the house. The first floor also includes a reception hall, dining room, a kitchen with breakfast nook, an ample pantry and a convenient first floor lavatory. Above stairs there are three bedrooms, a sewing alcove and two bathrooms.



THE DETROIT: After Seeing the Exterior as Shown in the Photograph Above and, in Colors, on Page 39, It Is Only Natural to Be Curious as to the Plan of This Attractive House and that Curiosity May Be Satisfied by Turning to the Four Pages Following This.



SECOND - FLOOR-PLAN



FIRST -  
FLOOR -  
PLAN

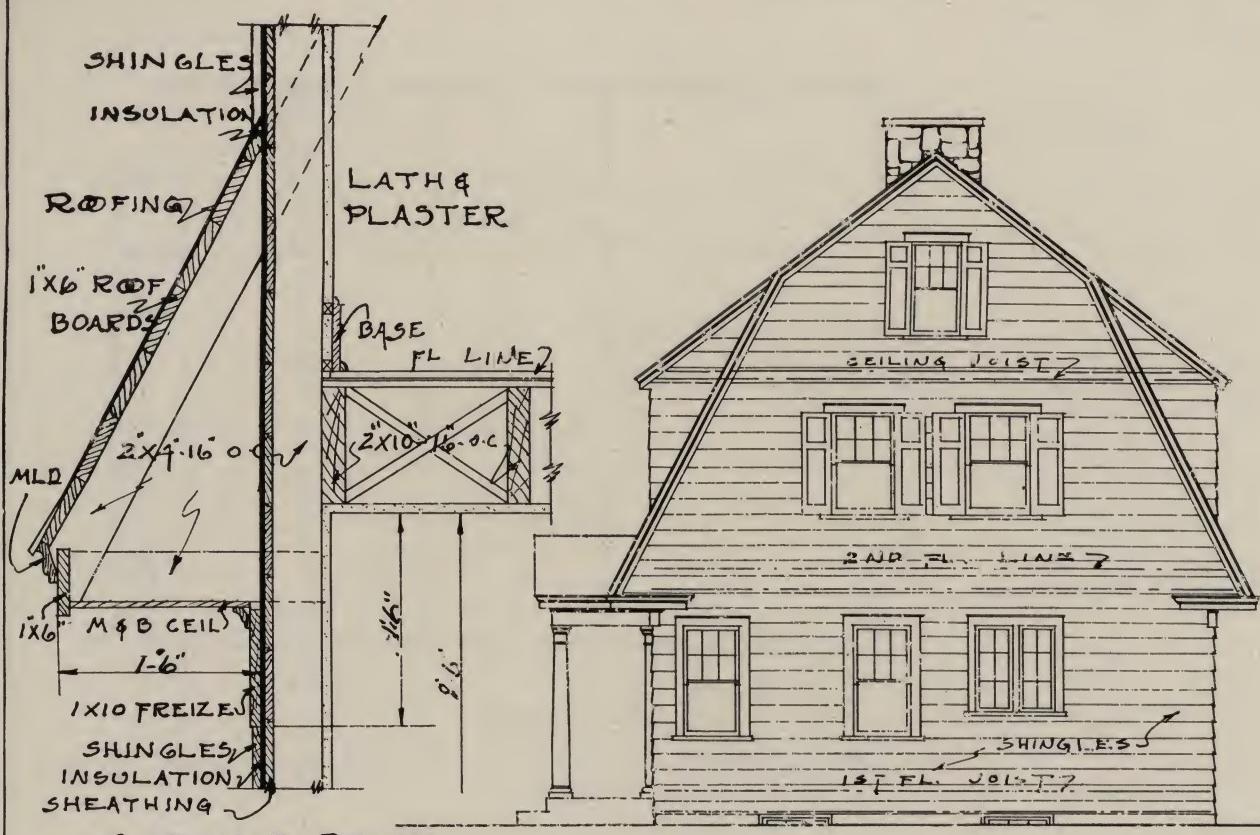
SHEET-NO.-1.

THE DETROIT: Floor Plans Tell a Story of Planning Which Considers Every Need of the Family that Will Occupy This Home, a House Arranged for Comfort and Lending Itself to Effective Decoration.

SCALE 1/8" = 1'-0"

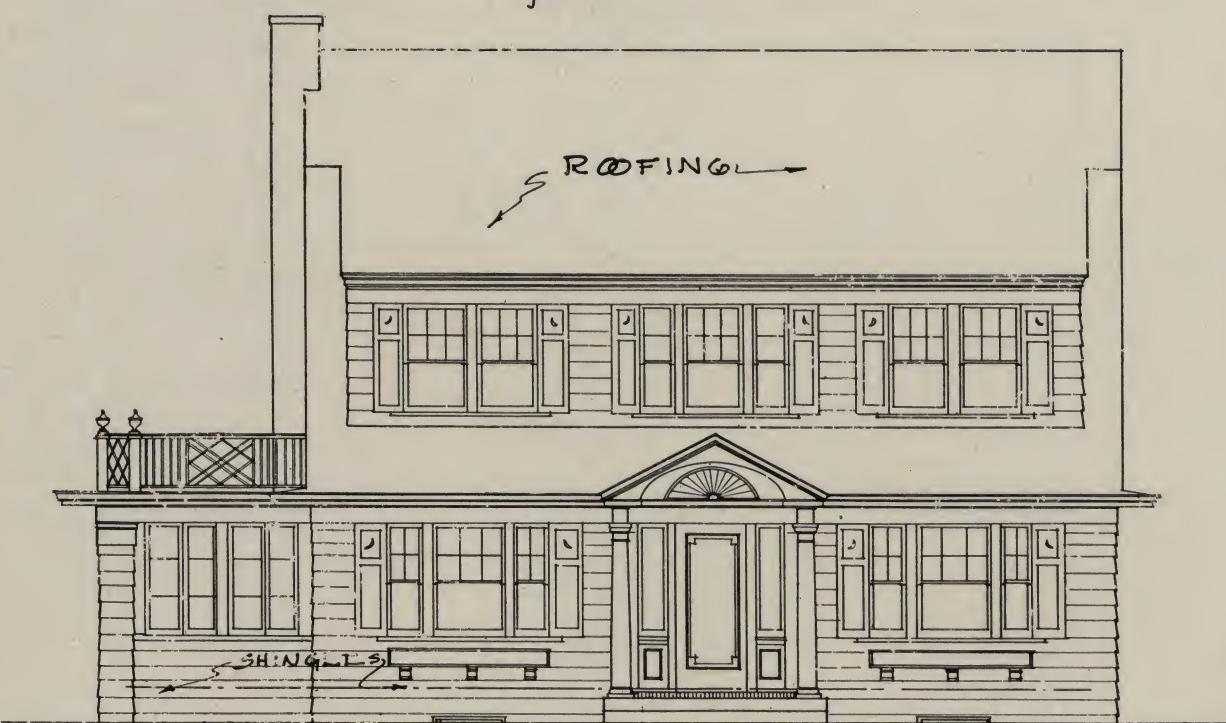
WINDOW SCHEDULE	
A	Z-LT 32/26
B	Z-LT 14/26
C	I-LT 14/52
D	Z-LT 26/26
E	I-LT 14/40
F	Z-LT 20/20
G	Z-LT 26/14
H	Z-LT 28/24
J	Z-LT 14/24

DOOR SCHEDULE	
1	3' 0" x 7' 0"
2	2' 8" x 7' 0"
3	2' 6" x 7' 0"
4	2' 4" x 7' 0"
5	2' 0" x 7' 0"
6	2' 6" x 6' 8"
7	2' 4" x 6' 8"
8	2' 0" x 6' 8"



SCALE 3/4"=1'0"

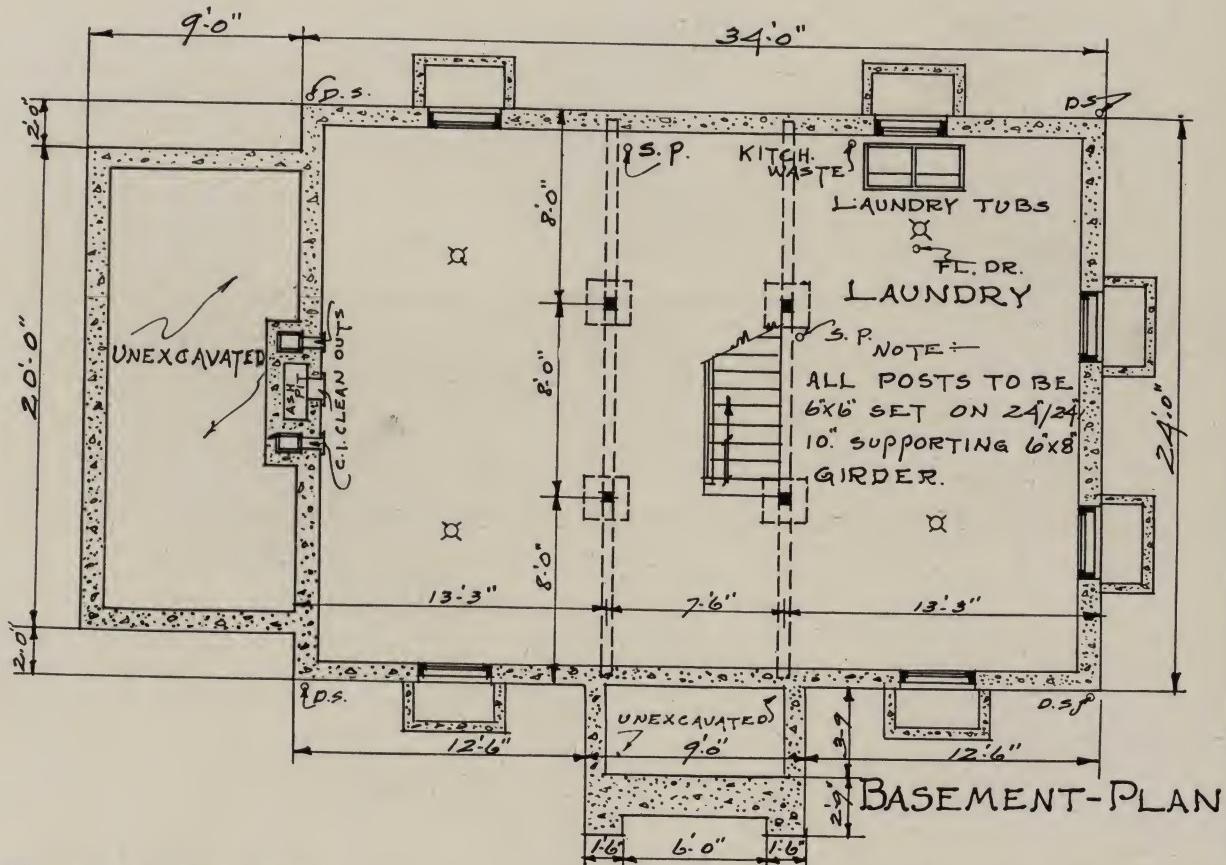
RIGHT-SIDE-ELEVATION



SCALE 1/8"-1'0"

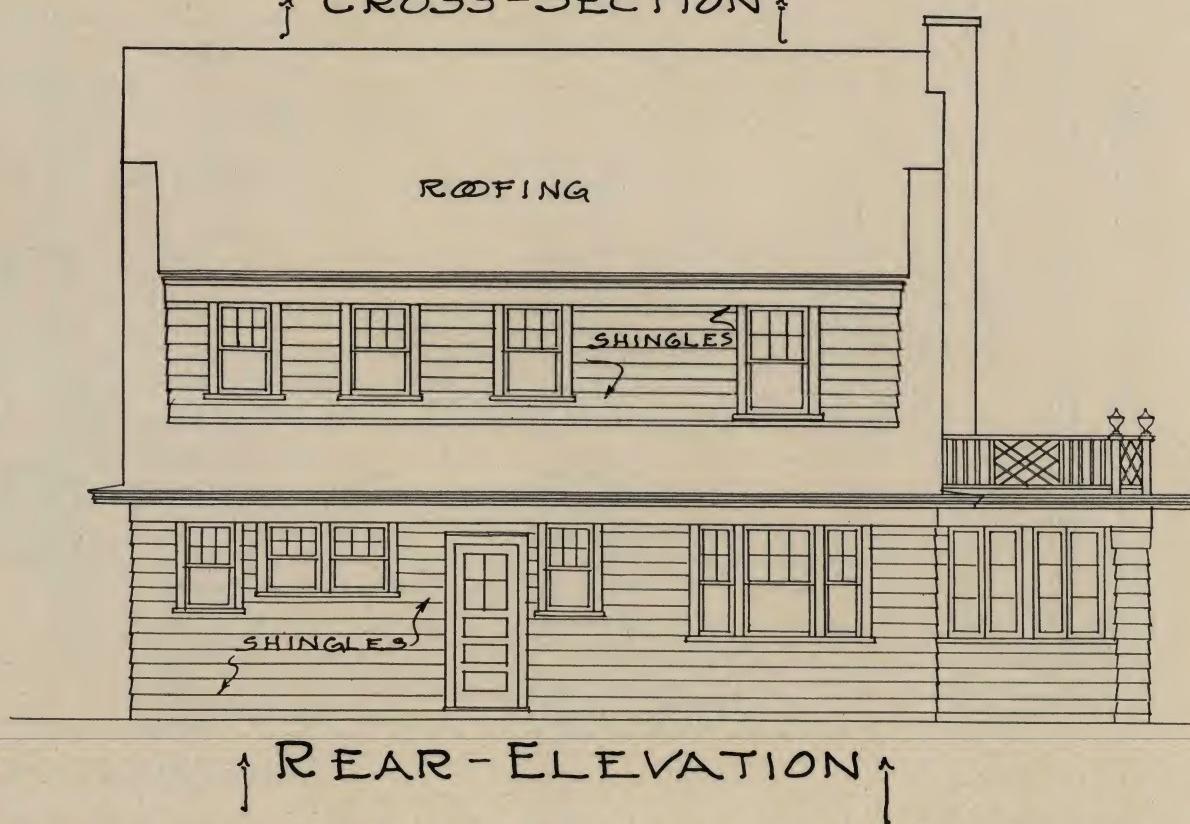
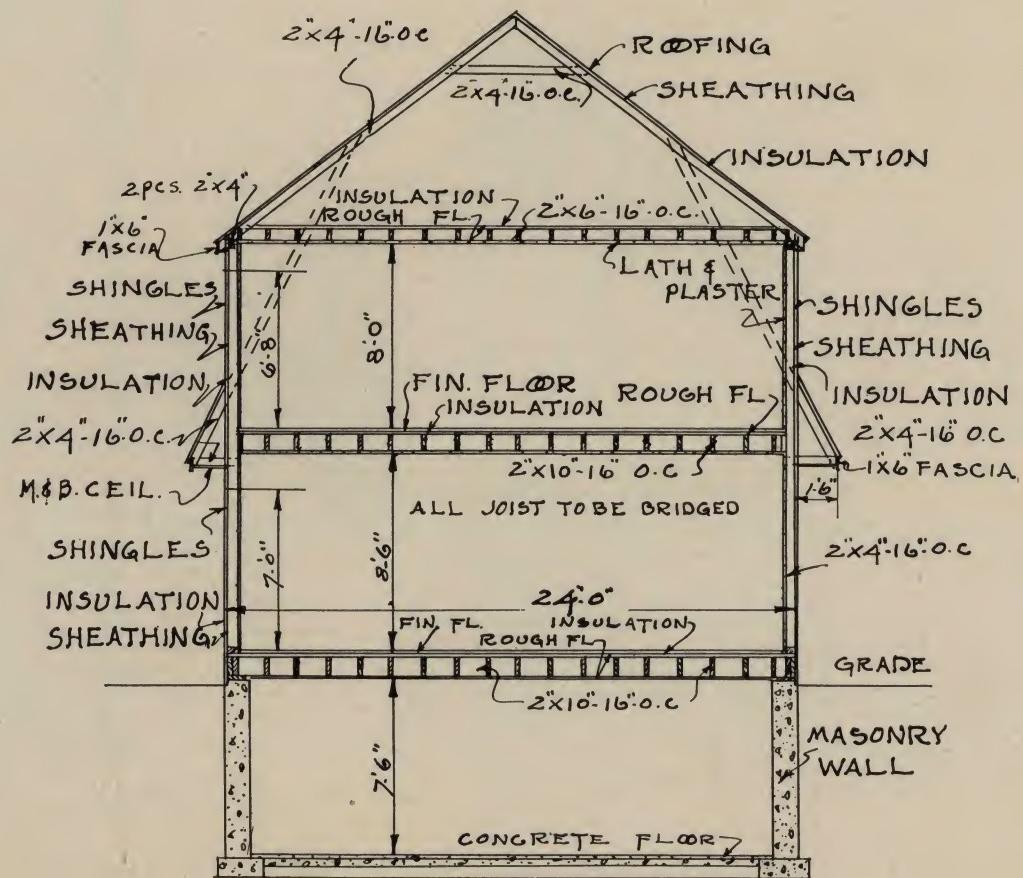
SHEET - NO - 2.

THE DETROIT: These Elevations Show the Front and Right Side of the House While the Detail Drawing Indicates the Construction of the Cornice. Pages 37 and 38 tell more of the construction story.

SCALE  $\frac{1}{8}$ " = 1'-0"

SHEET. NO.-3

**THE DETROIT:** The Basement Is Completely Excavated and Affords Space Which Can Easily Be Utilized if Extra Rooms Are Desired. The elevation shows the placing of the fireplace chimney.



SCALE 1/8 = 1'-0"

SHEET NO.4

THE DETROIT: Floor, Roof and Wall Construction, with Thorough Insulation Indicated, Are Seen in the Sectional View While the Rear Elevation Completes the Story of This Home.

## *The DETROIT*

A MODEL Dutch Colonial Design. For Complete Building Plans—Working Drawings to Scale See Pages 35, 36, 37 and 38.





## *The YARNELL*

A MODIFIED Colonial Home  
With Modern Sun Room. For  
Complete Building Plans—Working  
Drawings to Scale See Pages 42, 43,  
44 and 45.



# The Yarnell

The Demonstration House in Modified Dutch Colonial Style  
is Suitable for the Suburban or Country Home

(For perspective in full colors see page 40.)

**T**HIS home is one which has won a high degree of favor as one of the New York Herald Tribune demonstration houses. It was built at Palisades Park, N. J., by the Steenland Construction Company, under the supervision of the Home Owners' Service Institute. Oscar G. Nordstrom, Ridgefield Park, N. J., a member of the Steenland organization, was the architect responsible for the design.

This is a substantial frame house of modified Dutch Colonial architecture and is well adapted for either the suburban or country home. The projecting sun parlor serves to afford partial seclusion from the passing traffic of the corner location while the grill work between the porch pillars is an excellent foil for the severity of the entrance treatment. The baby evergreens, planted at either side of the entrance walk, form an attractive approach while the entire scheme of planting is well chosen and effective. The porch is deep and shady and with its brick floor ensures a cool and inviting retreat on even the hottest day. The airy sun parlor is a delightful spot at all times and seasons. In addition to this sun parlor, the first floor contains a large living room, extending the full depth

of the house, with a big open fireplace at one side. It is reached from the reception hall which also gives entrance to an ample dining room, to the rear of which is the kitchen.

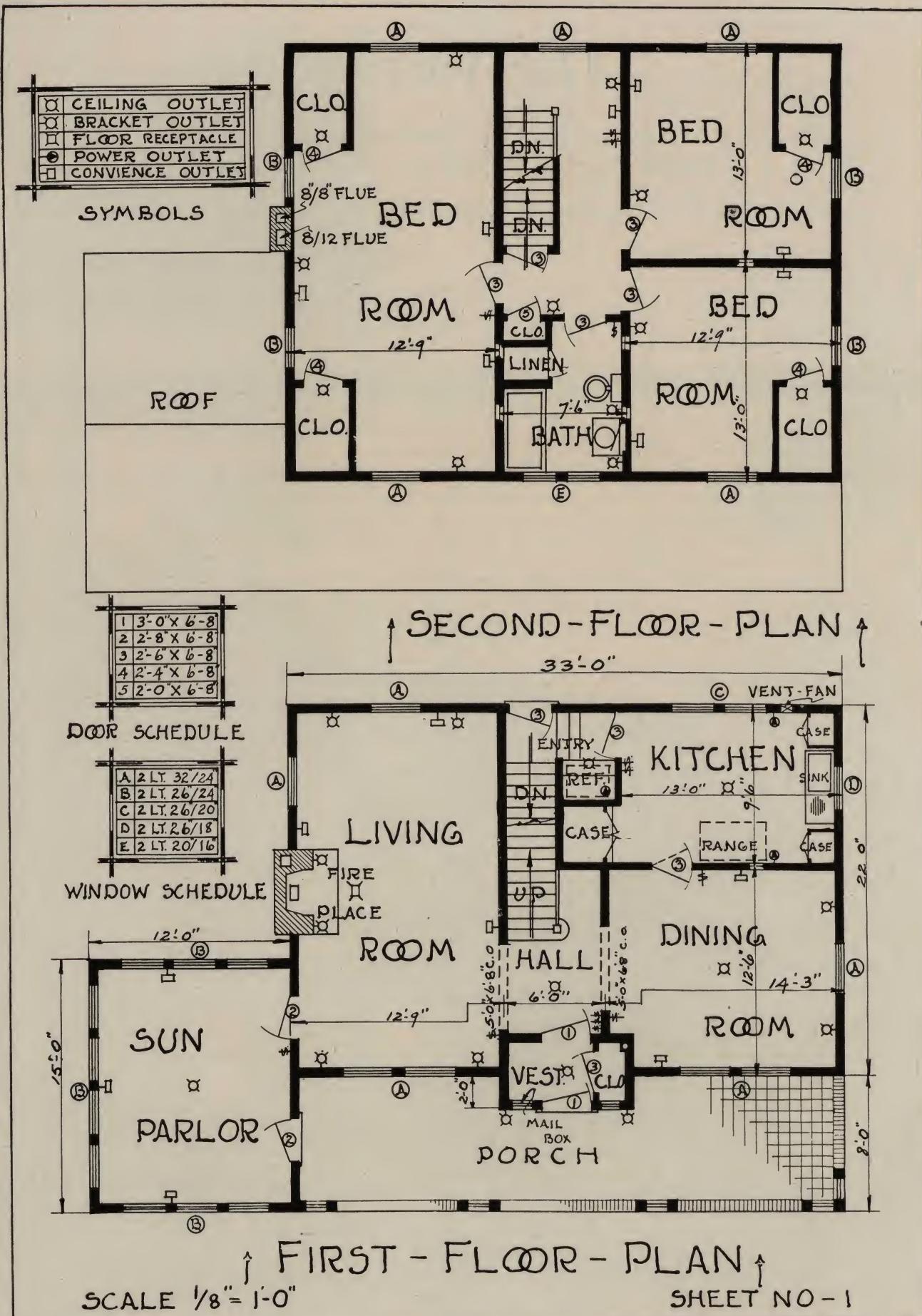
The latter room is compact and conveniently arranged to lighten the necessary labors and housework. Off it is a rear entry containing the basement stair and with the refrigerator set into a special closet. The stairway leading up from the reception hall terminates in a central hallway above stairs.

On the upper floor there is a large master bed room directly above the living room and occupying a corresponding space. Two large closets add to the convenience of this room and it is well provided with cross ventilation. At the opposite side of the house there are two smaller bed rooms each with its own large closet. The bath room is placed at the forward end of the hall, convenient to all bed rooms. In it there is a linen closet, while still another smaller closet is found in the hall just outside the bath room door.

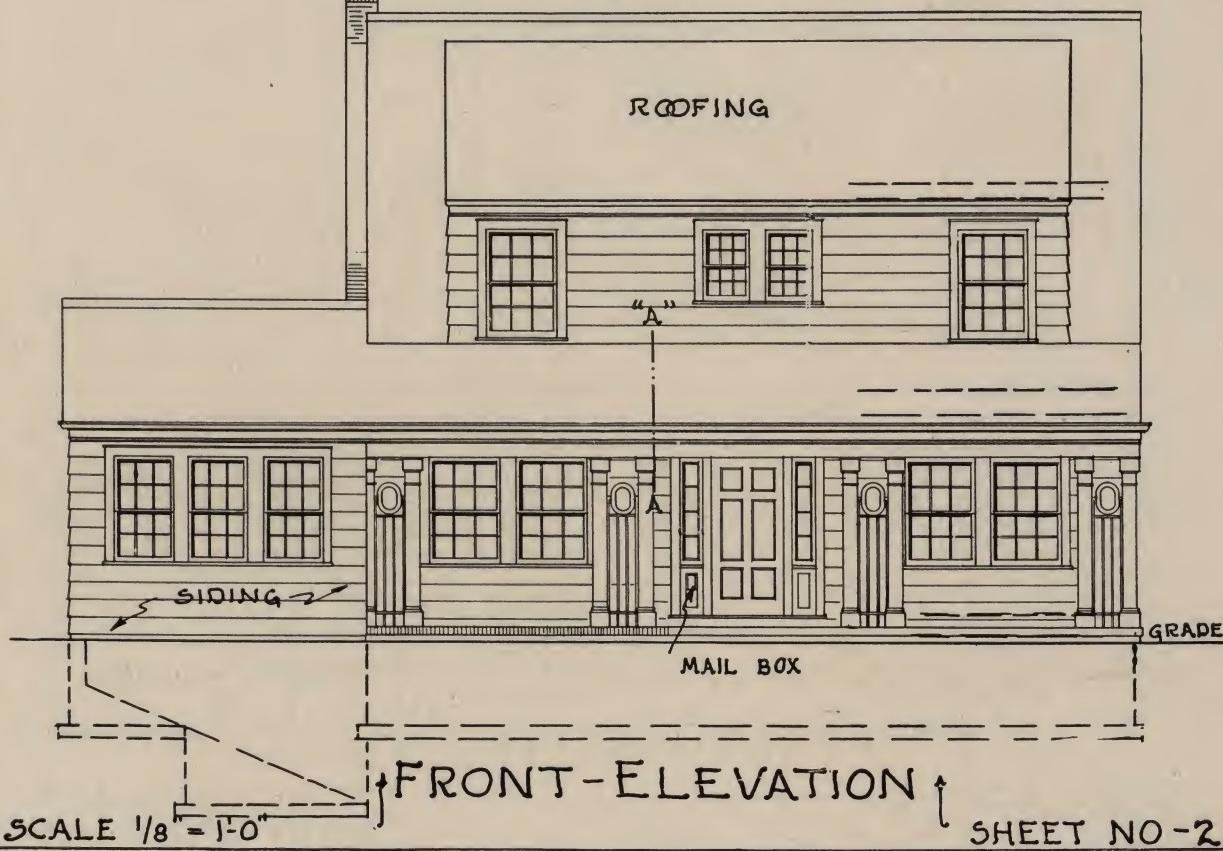
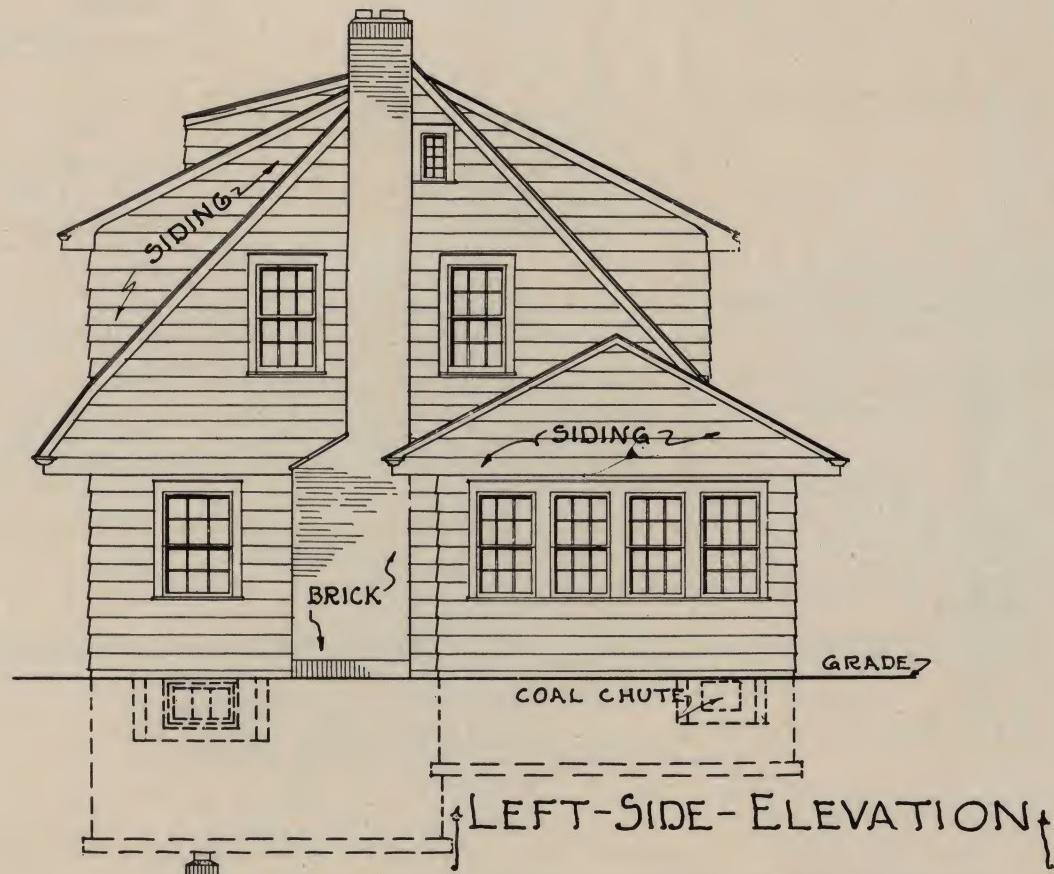
On the pages which follow the complete floor plans, elevations and details, drawn to scale, are reproduced.



**THE YARNELL:** A Charming Suburban Home, Complete Even to the Garage Which Harmonizes with the House Design. It is shown in full colors on page 40, while on the next four pages floor plans, elevations and details will be found.



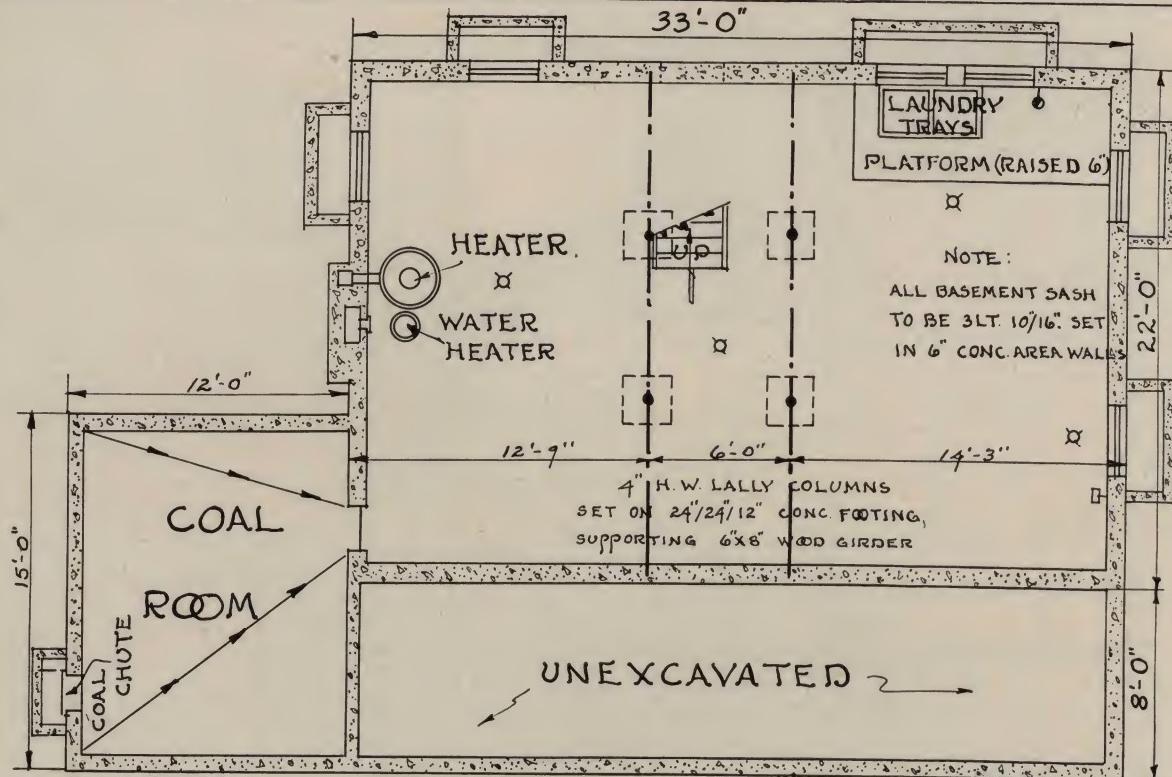
**THE YARNELL:** The Floor Plans Show a House of Six Rooms and Sun Parlor Offering a Maximum Amount of Roominess and Convenience in Every Detail from the Built-in Mail Box to the Kitchen Ventilating Fan.



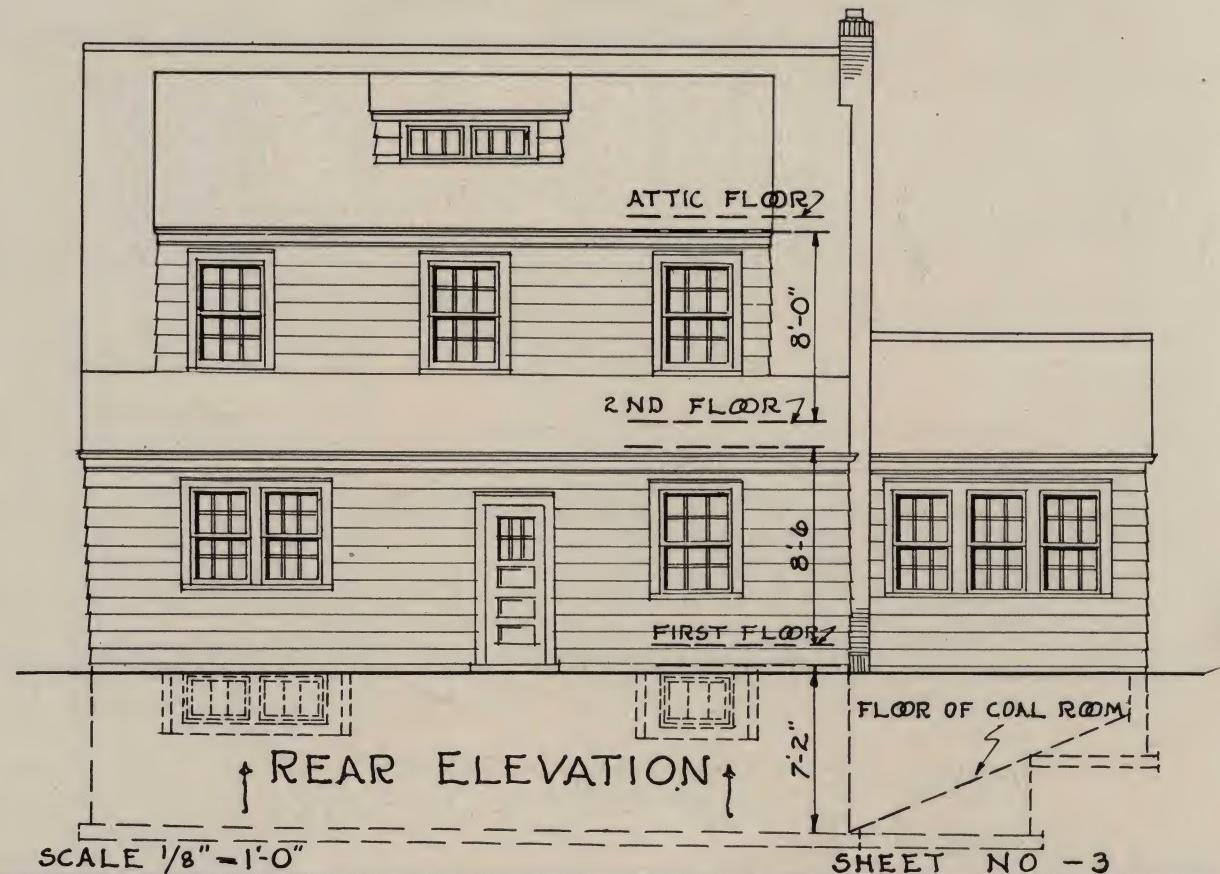
SCALE  $\frac{1}{8}$ " = 1'-0"

SHEET NO - 2

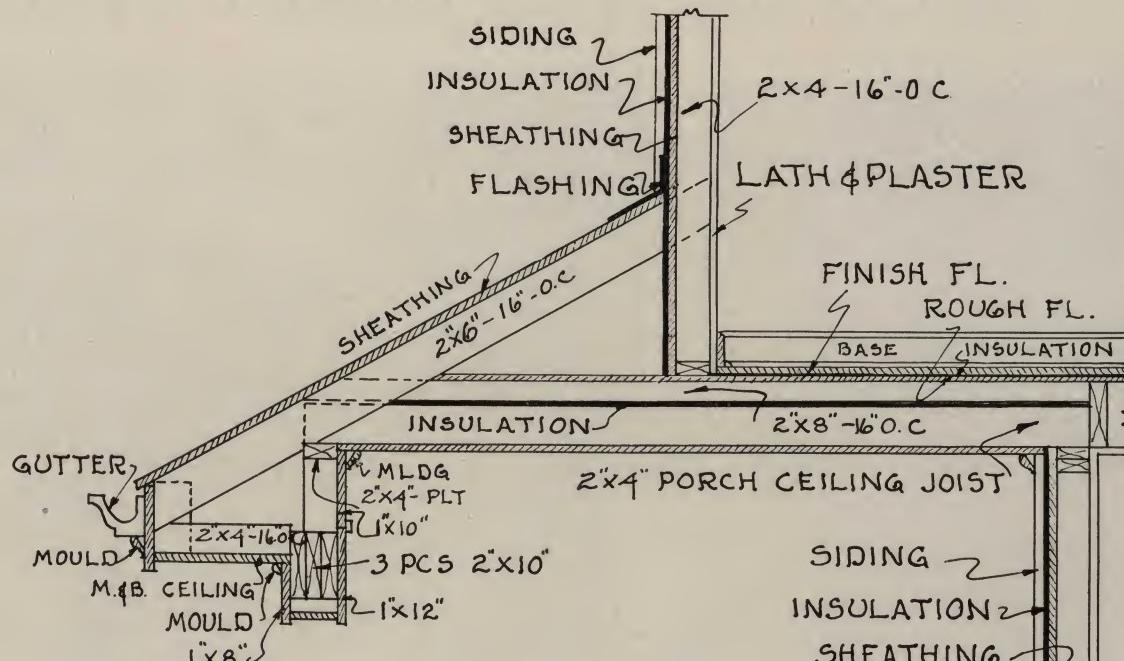
THE YARNELL: In Front and Left Side Elevations the Treatment of Roof Line, the Fireplace Chimney, the Pillared Porch and Sun Parlor Are Shown While on the Following Pages Further Details Will Be Found.



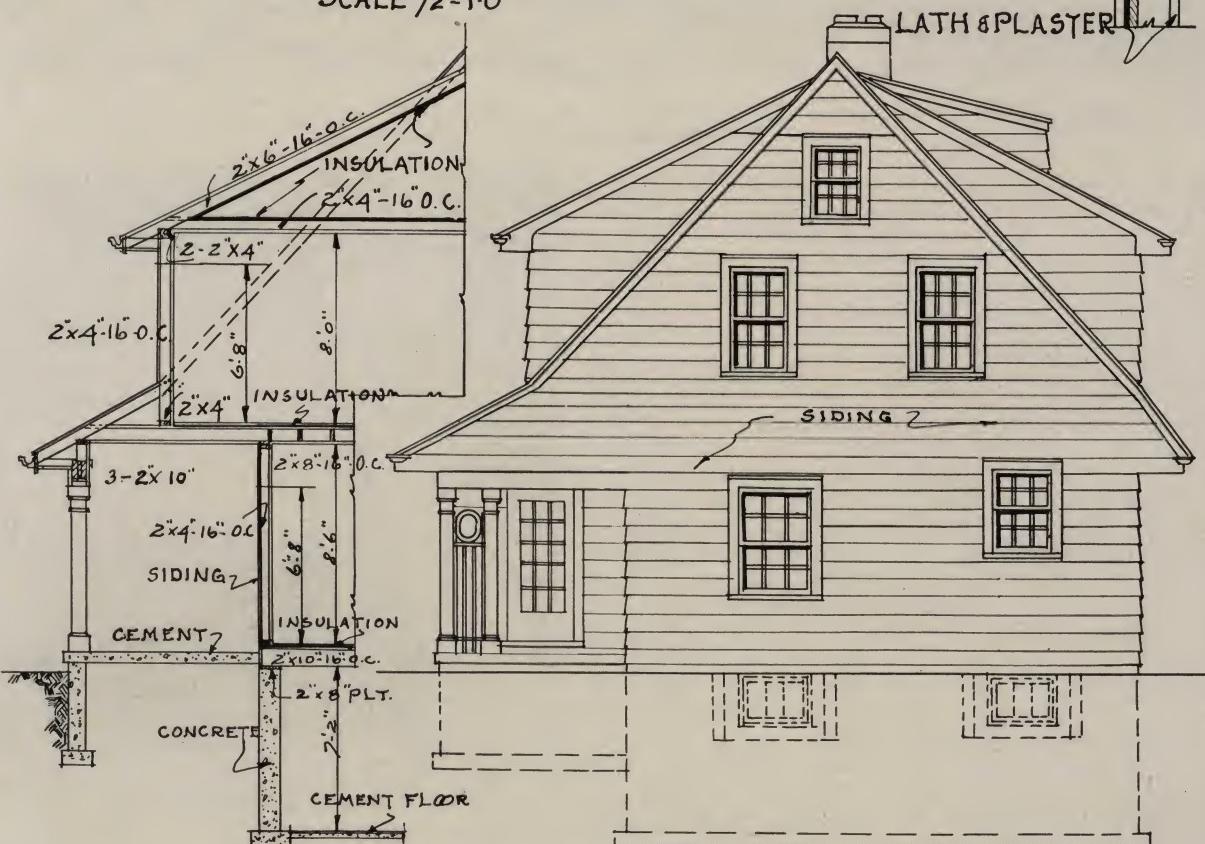
↑ BASEMENT - PLAN ↑



THE YARNELL: The Basement Is Completely Excavated Except the Space Under the Porch. Using the portion below the sun parlor as a coal room gives a very effective separation of the fuel storage.



SECTION "A"-“A”

SCALE  $1/2 = 1:0$ "

CROSS-SECTION

SCALE  $1/8 = 1'-0"$ 

RIGHT-SIDE-ELEVATION

SHEET NO -4.

**THE YARNELL:** Here Are Seen the Details of Wall Construction Showing the Insulation of Both Floors and Walls and Also the Construction of the Eaves. The side elevation completes the group of elevations shown on preceding pages.

# A Garage with Garden Atop



This Charming Garden of the Francesca Apartments, in Los Angeles, Is But a Step Off the Lobby of the Building and Is Planted Upon the Roof of the Garage.

**A**S a guest of the Francesca Apartments in Los Angeles you naturally expect, and receive, all the comforts and conveniences of a high-class hostelry of its kind; but you are not prepared for a very pleasant surprise which you stumble on quite by accident and which makes your stay even more enjoyable. The surprise consists in the discovery that the beautiful garden which you enter a few steps above the lobby, expertly designed, completely planted, strikingly developed, rests upon the roof of the apartment's garage. It is a perfect example of a charmingly landscaped rear garden suspended some 15 feet in the air by reinforced concrete.

There are many qualities to delight the eye in the Francesca garage roof garden, thanks to the architect, landscapist and builder. It is a broad velvety greensward bordered by a grass-grown paved walk behind which there are heather, shrubs of varying height and potted plants of many kinds, with benches of cast stone along the way that invite one to tarry for a while. At the farthest end a charming little lily pool with cat-tails is guarded by a beaming terra cotta satyr. Being equipped with electric standard lamps, this garden invites use by day or night.

No one would ever guess that he was walking on just 21 inches of soil, spread over two inches of crushed rock, above the garage roof. But that is the case. This base was necessary for proper drainage of the lawn and plants and was laid over asphalt and membrane waterproofing. In this bed of rock the sprinkling and electric conduit systems were laid and then covered with 21 inches of soil. The pool itself was built up of concrete above the roof to the level of the walk and equipped with special water inlets and outlets. The entire garden, measuring 80 by 100 feet, drains to two corners.

The planting by Neville Stephens required some special



The Garage Entrance with Steps at the Left Leading to the Garden Pictured Above.

study because of the shallow nature of the soil. This problem was solved, however, by the use of short-rooted plants and shrubs, and it is interesting to know that not a single one of the scores of different plants has required replacing. Trees and shrubs have now reached a height of several feet and are as healthy and vigorous as any that have all of Mother Earth in which to spread their roots. Curlett & Beelman, Los Angeles, were the architects.

# The Aquilla

## A Modern Brick Colonial Home

THE house illustrated below was a co-operative undertaking planned and built by a group of dealers and contractors in New Castle, Pennsylvania. This model or ideal home was intended to show to the people of New Castle all the modern features in construction, wood-work and equipment, actually applied in the building of an average home.

Plans, in Colonial style, were the work of J. A. Altschuler, architect. The design is that of a simple six-room and enclosed sun porch house of such a size as is commonly seen in the suburban districts of cities all over the country. In accordance with modern practice the living room is made proportionately large, extending entirely across the front of the house, with the exception of that space which is used for the entrance vestibule.

The sun porch, at the end of the living room and separated from it by French doors, in reality forms an extension of this room, adding an additional 9 by 12-foot space to the 13 by 19-foot space of the living room proper. Back of the living room are the dining room and kitchen. The former with a door onto an open porch to the rear of the sun porch.

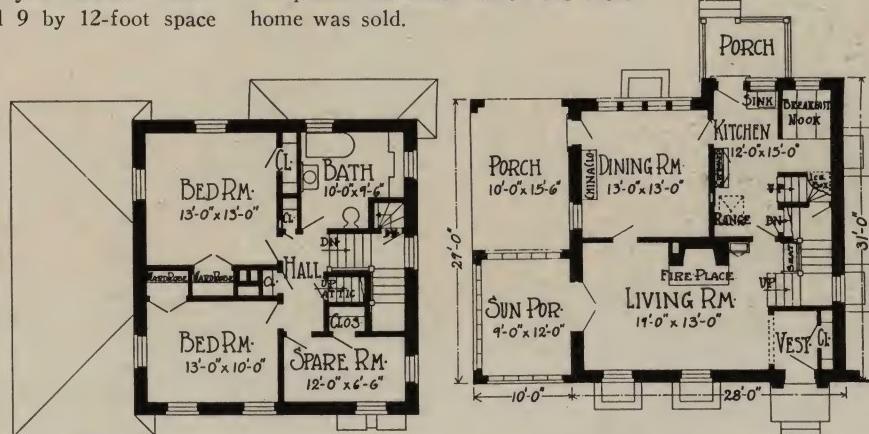
The kitchen is the small, compact type now in vogue in which the space is scientifically utilized and the equipment, including a breakfast nook, is largely built-in. From the kitchen a rear door opens onto a small service porch and there is a stairway to the basement. The second floor is reached by a stairway leading up directly from the living room at the vestibule end.

On the second floor there are two good sized bedrooms and a smaller

spare room. Each of these has a closet provided with a built-in wardrobe which greatly increases the capacity of the closet space. One of the bedrooms has an additional closet and there is a linen closet in the hall close to the bathroom door. Every room has windows on two sides assuring ample cross ventilation and light.

The exterior of this house is in brick, depending for ornamentation on a belt course below the second floor windows and on the wood-trim including wooden shutters of typical Colonial style. There is also a wooden gateway with brick gate posts, used in connection with the driveway at the side and balancing the sun porch at the opposite side.

When placed on public exhibition this house was shown completely decorated and furnished by decorators and furniture dealers also co-operating. All of this group aided in financing and carrying the demonstration until after the public exhibition when the ideal home was sold.



This Is Not a Large House but Contains Six Good Sized Rooms and an Enclosed Sun Porch Well Arranged for the Use of a Typical Modern Family.



**THE AQUILLA:** An Unpretentious but Fully Modern Home, in Construction, Woodwork, Equipment and Decoration, Suitable for the Average American Family, Planned and Built by the Co-operation of Dealers and Contractors as a Demonstration to the People of New Castle, Pennsylvania.

# The Archdale

Quality and Beauty at Low Cost



**THE ARCHDALE:** Cream Colored Stucco Walls and a Roof Shingled in Tones of Green, Pink and Gray, Give a Harmonious Effect Which Is Set Off by the Brick Work of the Chimney Top and About the Windows.

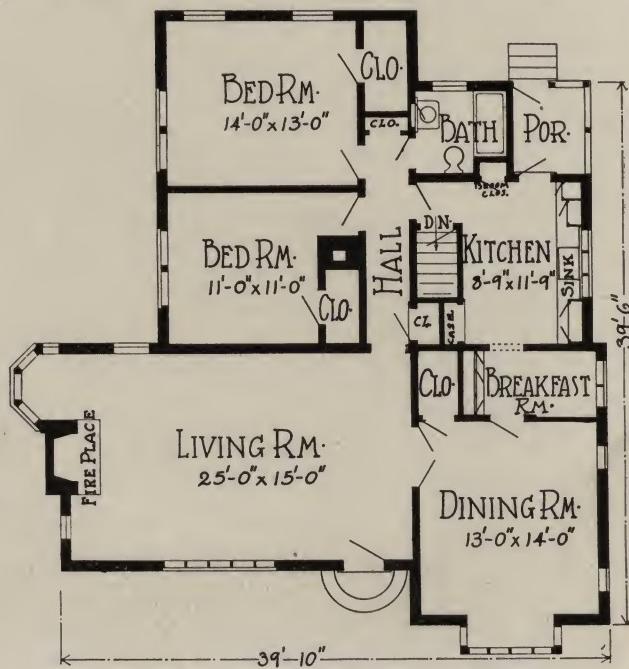
A CREAM colored stucco has been used for the exterior finish of this attractive and well constructed home in Pueblo, Colorado. The studding is 2 by 6, sheathed and papered, and the stucco is applied on metal lath. Stained shingles, in tones of green, pink and gray, were used on the roof while the window frames are painted a dull green and the sash ivory.

The interior woodwork is all of fir with a waxed oak finish and the floors are of flat grained oak, except in the kitchen and bathroom where they are covered with linoleum.

A glance at the floor plan shows a large living room, 15 by 25 feet, with a cast stone fireplace and beamed ceiling. Between the dining room and kitchen is found the popular breakfast nook, a feature of so many of the more modern homes. To the rear there are two bedrooms, one 11 feet square, and the other 13 by 14 feet. There are large closets off of each of these rooms and a bathroom close by.

The basement is almost fully excavated and here are the usual furnace, coal, laundry and storage rooms and also a large room, at the front, which will later be finished as a social room, with a floor for dancing. The heating is from a hot air furnace and in-swinging casement windows have been used.

While this is one of the most interesting and well planned homes recently built in Pueblo, its cost was quite reasonable, amounting to about 25 cents a cubic foot for approximately 32,000 cubic feet of content.



A Large Living Room and a Breakfast Nook, Typical Features of the Modern Home, Are Conspicuous in This Plan.



The Entrance of This Attractive Home, "THE ARCHDALE," Is Worthy of Particular Note. Though quite simple, each detail has been handled in an effective manner, from the grill above the heavy plank door to the flagging of the approaching walk.

# Veneered Interior Trim Suited to All Classes of Homes

**N**OWHERE is the progress of Americans in appreciation of the finer arts more apparent than in our medium and higher-priced residences. Many of even the cheaper homes express excellent taste and strong individuality and this development of taste and individuality is reflected in the trend of interior trim.

The two pictures herewith were taken in a residence costing between \$25,000 and \$30,000, one of the higher-priced houses from the viewpoint of this article, but they were selected because they indicate the trend of the times in interior trim and are typical of the results that can be achieved where one has money to gratify desire.

This house was built by the owner as his own home and he had an ideal for inspiration. Admiring American walnut, he succeeded in acquainting his architect with his wishes and the first floor is finished entirely in walnut. Moreover, so particular was he that he visited a veneer mill with his contractor and personally selected the veneers with which his woodwork is faced.

The mantel in the living room, with its large panel of matched walnut stump wood, is typical of the good judgment exercised in the selection of wood for the doors and other finish. The dining room, with its walnut paneling, is especially pleasing. These panels are faced with matched veneers taken from one flitch, with the result that they all have uniform figure. The door panels are of matched stump wood and the rails and stiles are of ripple or fiddle-back figure.

Another owner, with a strong penchant for quartered oak, selected his veneers from one tree, which was cut to his specifications, and his roomy bungalow is a symphony in that wood. Panels, trim, ceiling beams, doors and even the insides of window sash are veneered with wood of harmonizing figure and tone. Veneers from the same tree were used on the furniture, which was made especially for the house. The narrow, polished oak flooring was selected with regard to tone and shows no light and dark streaks.

These instances indicate what can be done by the home builder who does not have to consider expense in the materializing of his dreams. His enthusiasm is easily communicated to his architect, contractor and the concern which builds the trim, and the veneer manufacturer is glad to give his hearty co-operation.

Members of the Mahogany Association built a beautiful residence in Louisville, designed to show what can be done with mahogany, and its interior finish was made entirely of that wood. After being used for exhibition purposes the house found a ready purchaser.

But the chief interest of this article lies in suggesting to the builders of modest residences, mostly paid for on the installment plan, how, without materially increasing costs, they can approximate the interior effects of the more ambitious houses by the use of stock plywoods.

There is inherent in humanity a love and admiration for wood finish. The psychology of this has been recognized and turned to financial profit by many contractors who build



This Mantel with Its Large Panel of Matched Walnut, in a Residence Costing Between \$25,000 and \$30,000, Is an Example of the Possibilities Where Good Judgment Is Used in Selecting Woods for Interior Trim.



**A Dining Room with Paneled Walls, the Panels Being Faced with Matched Veneers Taken from a Single Flitch, Is Particularly Pleasing.**

to sell. They have learned that some veneered paneling has a strong attraction for the ordinary home buyer and results in easier sales at higher prices.

Fortunately, the ancient prejudice attached to veneered goods has practically passed away. Veneering is now reduced to an exact science and many large manufacturers are building millions of feet of plywood every year. The demand is constantly increasing as it becomes more generally known that the product is more stable than solid construction and that such defects as warping, splitting and loose veneers have been practically eliminated. Notwithstanding the assertions of some misinformed furniture salesman, very little modern furniture is built of solid wood.

For any who have lingering doubts as to the stability of plywood, we would recommend an investigation of the piano. Besides being a musical instrument, this is the handsomest piece of furniture that goes into the home, and it is subjected to infinitely hard usage in spite of the best of care, such as rapid changes in temperature and humidity, yet the veneered surfaces exhibit no defects through the long years they are in service. All pianos are veneered, in fact, the graceful curves of grand pianos can be accomplished with no other material than laminated wood.

In every large city may be found stocks of plywood from which suitable selections can be made. These embrace both the fancy cabinet woods and cheaper woods, and are adapted to a great number of purposes. They are manufactured by concerns specializing in the business and can be depended upon not to develop structural defects.

These stocks are easily accessible to the smaller towns, as are also the large stocks carried by many of the manufacturers; lists may be had on application. One will find walnut, mahogany, plain and quartered oak, maple, ash, plain and figured gum, among the more expensive woods, in a great variety of sizes and plies. Immense quantities of birch, fir and California white pine are on the market, ready for immediate delivery. The fir has a characteristic and pleasing figure while the pine is not so strongly figured, both take stains and finish nicely. A late importation is Gaboon mahogany, which is becoming popular in the East. It is not genuine mahogany, but has a typical mahogany color, without much figure. All of these are built-up with water-resistant glues and may be purchased at moderate

prices in large or small sizes; they all have single-piece faces.

A recommendation for plywood panels for interior trim that will be appreciated by the contractor is that they are easily installed and cover surface rapidly. While not much subject to shrinking and swelling, rabbeted mouldings or battens should be used to hold them in place and cover the joints. Such few nails as are used in holding the panels should be placed so as to be covered by the mouldings. An otherwise handsome job can be spoiled by some jack carpenter driving nails in the panels where they will show. When placed against a brick wall or one that is likely to accumulate moisture, the backs of panels should receive a coat of asphaltum paint.

The manufacture of plywoods requires special equipment, experience, constant practice and unremitting carefulness, hence the necessity of purchasing them from a concern specializing in their manufacture. In the larger cities may be found a few concerns capable of making good plywood, but they cannot compete with the specialty house, manufacturing on a quantity production basis, either in quality or price.

Exterior veneered doors should be made with water-resistant glue, and as these are not successfully applied with the brush, such doors should be purchased from regular door manufacturers, equipped with glue spreaders. In such factories all material is tested for moisture contents, the cores are built-up of narrow strips, which minimizes the inclination to warp, and a crossbanding of veneer with the grain running at right angles to the grain of the core and face veneer is laid between the two. They cannot be split with an ax and can be immersed in water for days without appreciable swelling.



### Using Paper Twice

**T**HE photograph shows how varied are the uses of building paper. Besides being used for sheathing and other regular purposes in the building of any structure, it can be made to perform many other important and valuable duties.

In the accompanying pictures a building paper of especially tough composition is shown spread over the foundations of a house to protect them from the elements. Because it is waterproof and difficult to tear, it is invaluable for this and similar uses. Afterwards the same material can be used for sheathing.



**This Building Paper Is so Tough That After Being Used to Protect the Foundation It Was Still in Condition for Use in Sheathing.**

# The Fairhaven

Here Is a House in Which Quality and Permanence of Both Materials and Design, Can Be Instantly Recognized by the Home Seeker

(For perspective in full colors see page 57.)

WHEN one looks at the picture of this home, reproduced at the bottom of this page, and in full colors on page 57, he is immediately impressed with an atmosphere of permanence and feels assured that here is one house which will still hold its charms years from now, when it is no longer new and "the very latest thing." That is the advantage of a house which is wisely planned, the materials for which are well selected and the design for which is along lines of permanent worth rather than momentary style fad.

Here brick and half-timbered stucco have been most judiciously combined in a style which is strongly suggestive of the English cottage architecture. This suggestion is furthered by the use of the thatch type roof which fits down over the building with a protective air and lends a touch of coziness to the whole effect. The small paned, casement windows are in perfect harmony with the other features that make this home what it is.

For those who are fond of a blazing open fire, the massive chimney, forming the central feature of the front elevation, offers a promise of a home-like living room with a broad fireplace. Nor will these be disappointed for a reference to the plans to be found on the pages which follow this, shows us just such a fireplace as we have dreamed of having in our ideal home.

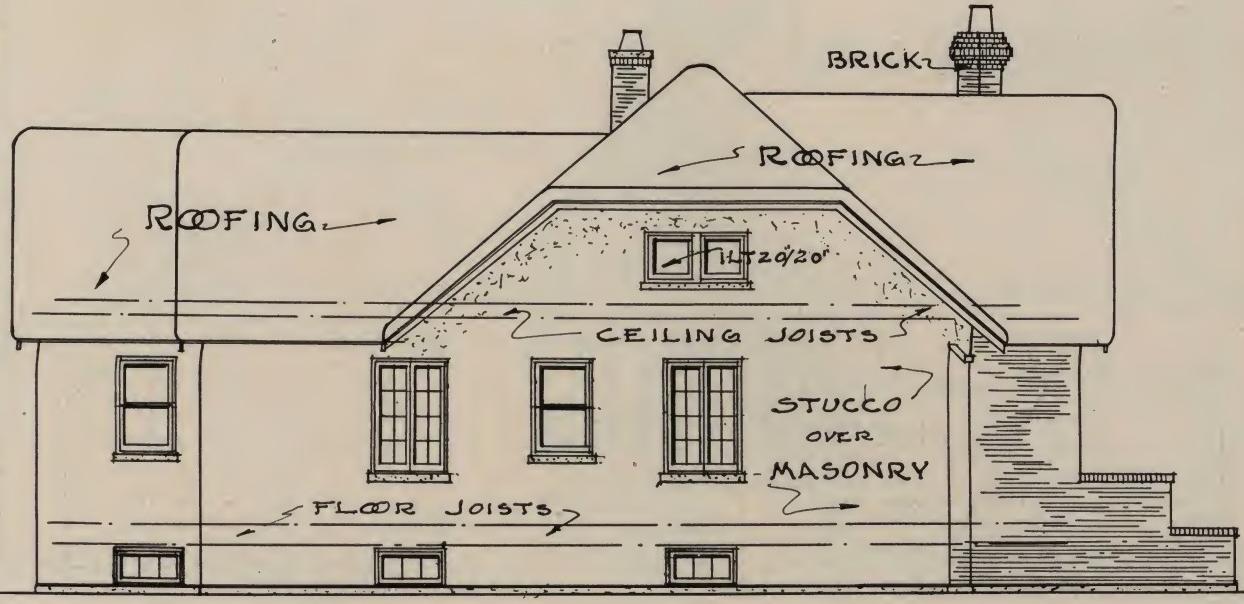
These same plans, including complete working drawings, to scale, show a most satisfactory arrangement of rooms, one which we could hardly improve by any amount of study. Especially interesting is the living room, opening clear through the house from front to rear, and forming a central section with the sleeping quarters in one wing and the living rooms in the other.

In inspecting these plans our attention is caught by the suggestion for utilizing basement space for a billiard room or play room. For many years valuable basement space was allowed to stand idle in our American homes, merely collecting dirt. Today there is a decided tendency to put this space to work and the more modern plans call for billiard rooms, children's play rooms, music rooms, recreation and dance rooms and a multitude of other uses for the extra basement space.

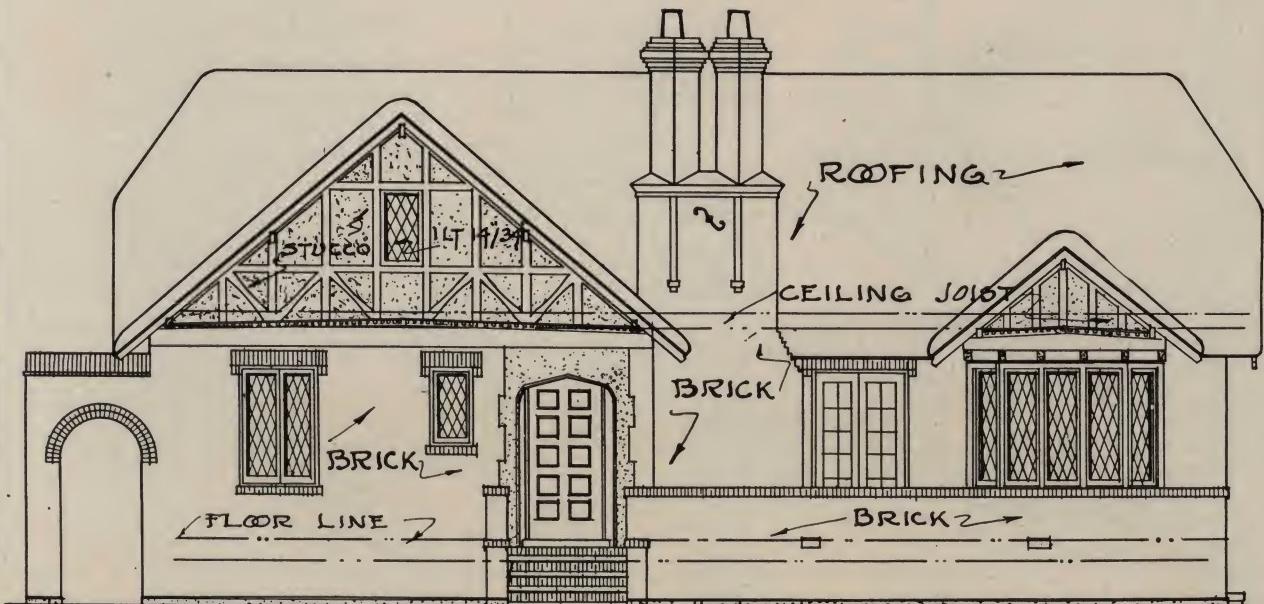
Not only is this an economy of space and an inexpensive addition of convenience and luxury, but it is also an improvement in the house which makes for actual saving of money. When such a space is finished and cared for it helps to keep the dirt from the heating plant from spreading through the house, a fact which will be quite noticeable in the reduction of bills when it comes to redecorating.



THE FAIRHAVEN: An Exterior Which Instantly Attracts and Holds the Attention Is Seen in This Photograph. An equally pleasing plan is to be seen, together with elevations and details on the four pages which follow.



LEFT-SIDE - ELEVATION



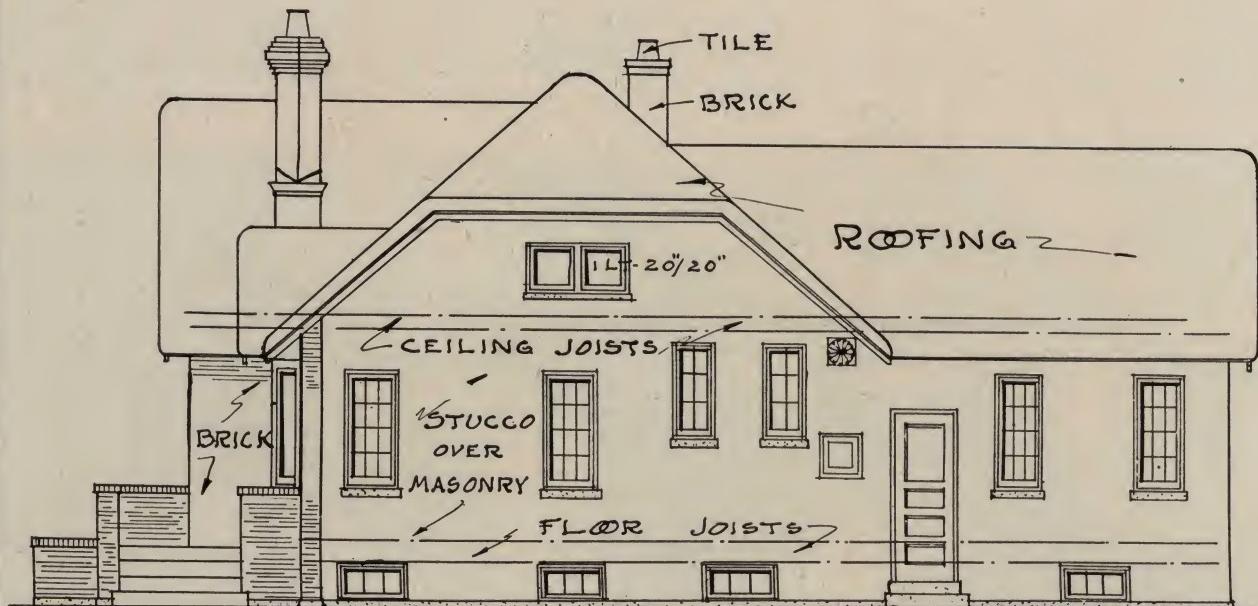
FRONT - ELEVATION

SCALE  $\frac{1}{8}$ "=1'-0"

SHEET-NO-1.



REAR-ELEVATION

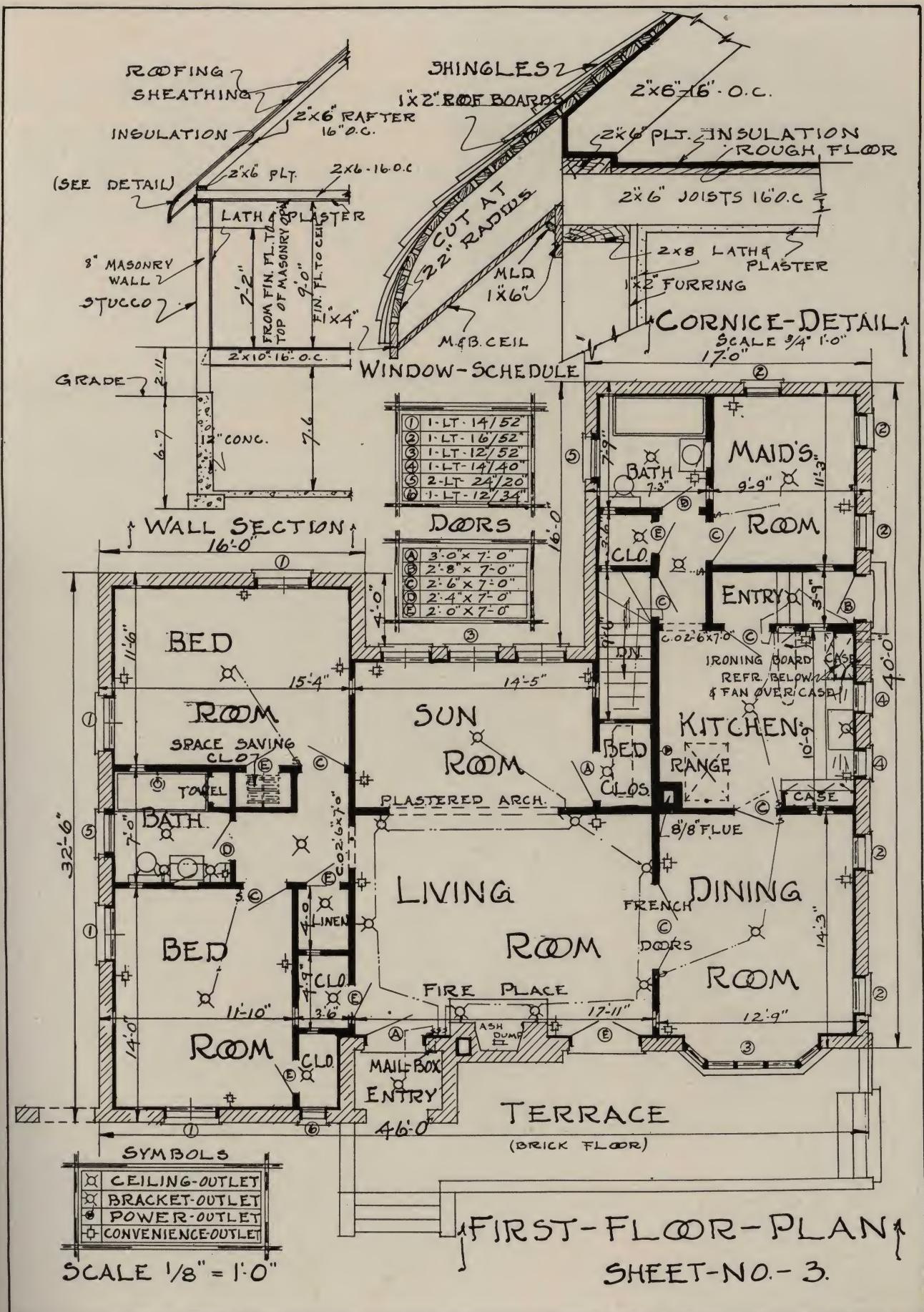


RIGHT - SIDE - ELEVATION

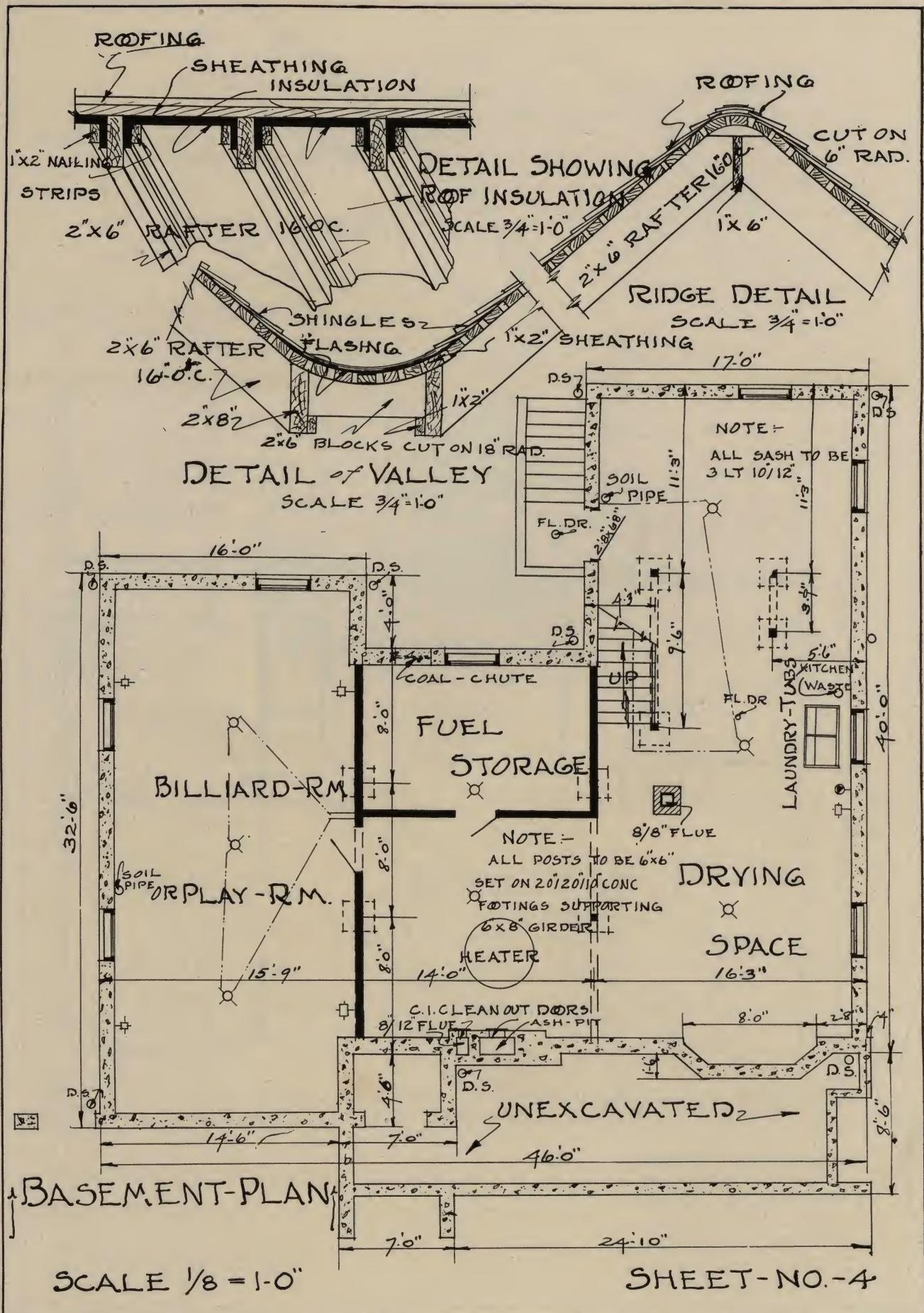
SCALE  $\frac{1}{8}$ " = 1'-0"

SHEET-NO-2.

THE FAIRHAVEN: Two More Elevation Drawings Complete the Series While on the Pages Which Follow Will Be Found the Floor Plans and Detail Drawings.



THE FAIRHAVEN: The First Floor Plan Offers a Most Attractive Layout While Above Are Seen the Necessary Details of Wall and Cornice.



THE FAIRHAVEN: A Basement Plan Which Utilizes Often Wasted Space by Providing a Billiard or Play Room.  
Above are details of valley and ridge construction.

# The FAIRHAVEN

A BRICK and Stucco Cottage of Elizabethan Lines. For Complete Building Plans—Working Drawings to Scale See Pages 53, 54, 55 and 56.





## *The ALTURAS*

A TYPICAL Normandy Design  
With Round Tower Entrance.  
For Complete Building Plans—Working  
Drawings to Scale See Pages 60,  
61, 62 and 63.



# The Alturas

Norman Cottage with Round Tower Entrance Provides a Home of Distinction

(For perspective in full colors see page 58.)

THE never-ending quest for "something different" has brought home builders around to a revival of the picturesque towered houses of Normandy. The example pictured below and in full colors on page 58 is a very successful design. The interior is just as practical as the exterior is unique and good looking. The round towered entrance in the inside corner, with dining room and living room wings right and left makes for a fine separation of the important parts of the floor plan. A high arched ceiling in dining room, living room and reception

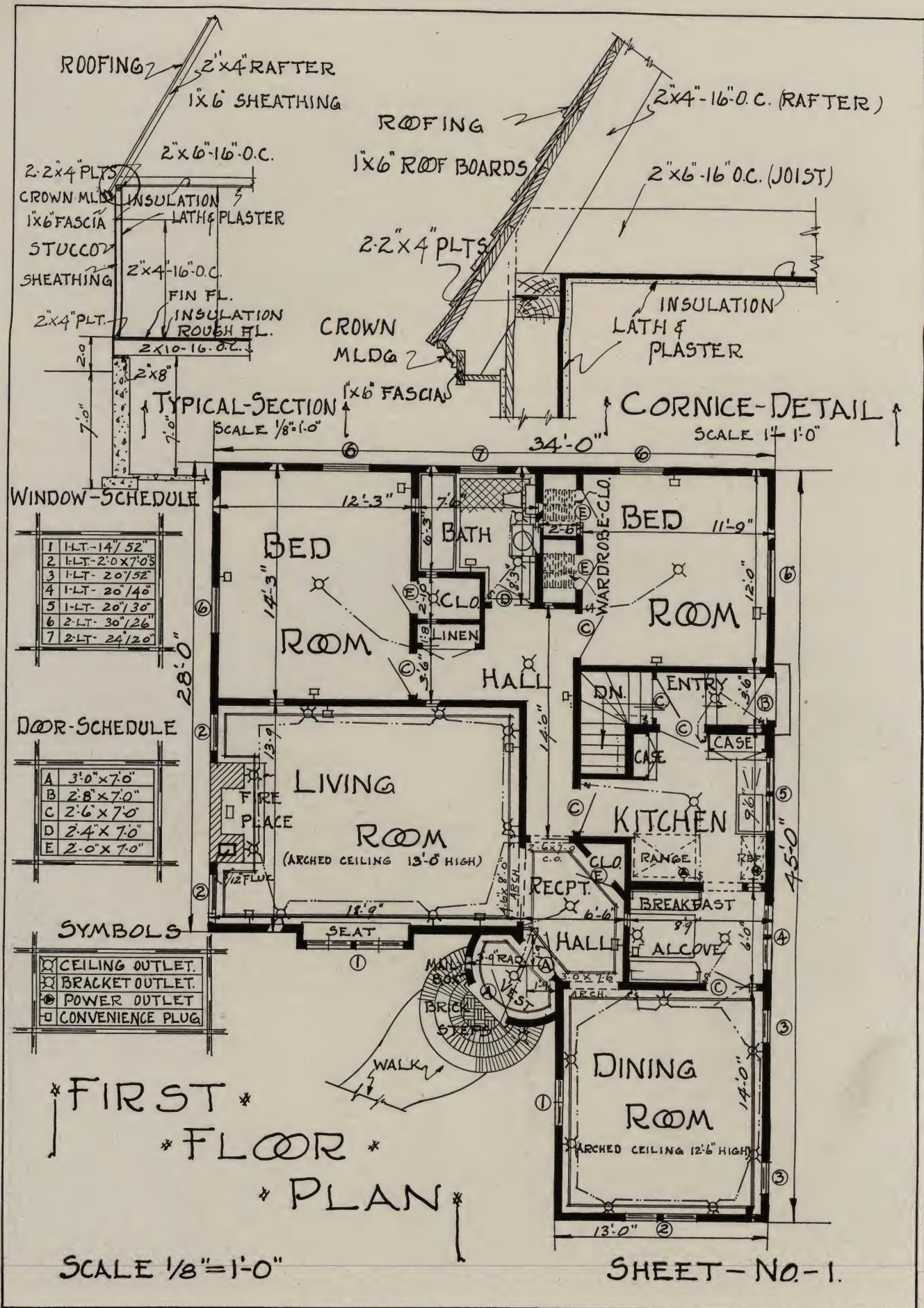
hall give almost a regal look to this interior. The two sleeping rooms are off by themselves for privacy and quiet.

Complete working plans, one-eighth inch to the foot, are presented on the four pages following.

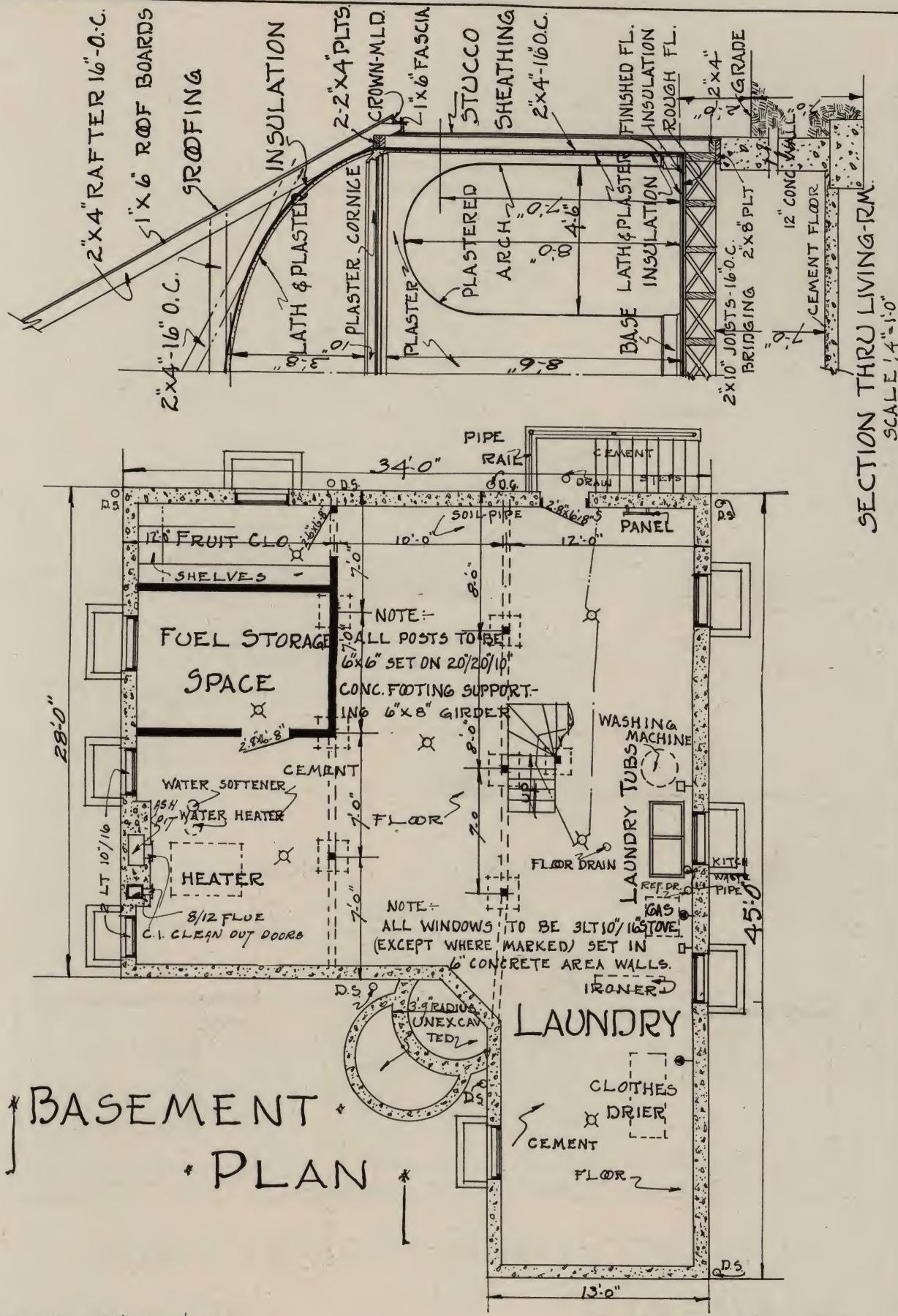
The kitchen is centrally located, yet is inconspicuous. The breakfast alcove makes an attractive nook, convenient to the kitchen and so cheerfully well lighted that it will be used often in place of the larger dining room. The grade entrance and back entry leading to the basement are well arranged.



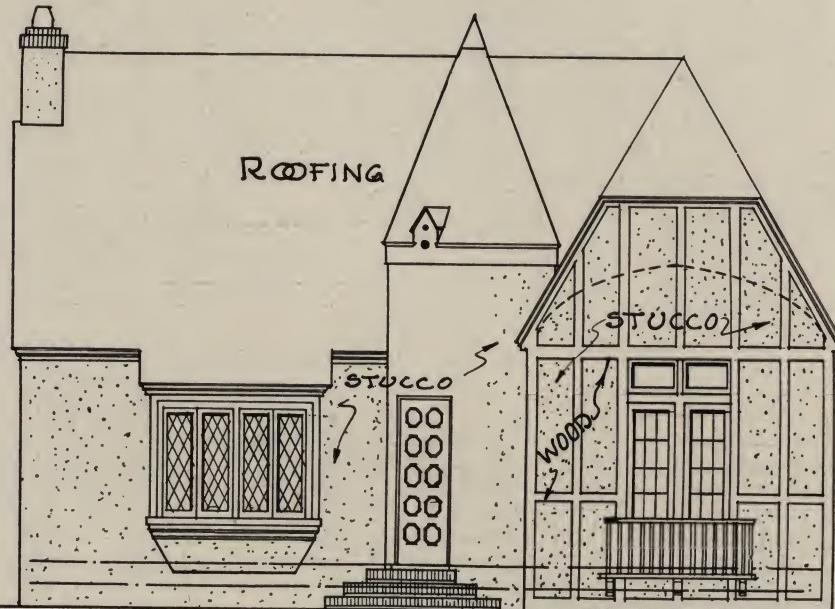
THE ALTURAS: Norman Cottage of Five Rooms, Bath and Breakfast Alcove and with High Vaulted Ceilings in Dining Room, Living Room and Reception Hall. See the four pages following for complete working plans.



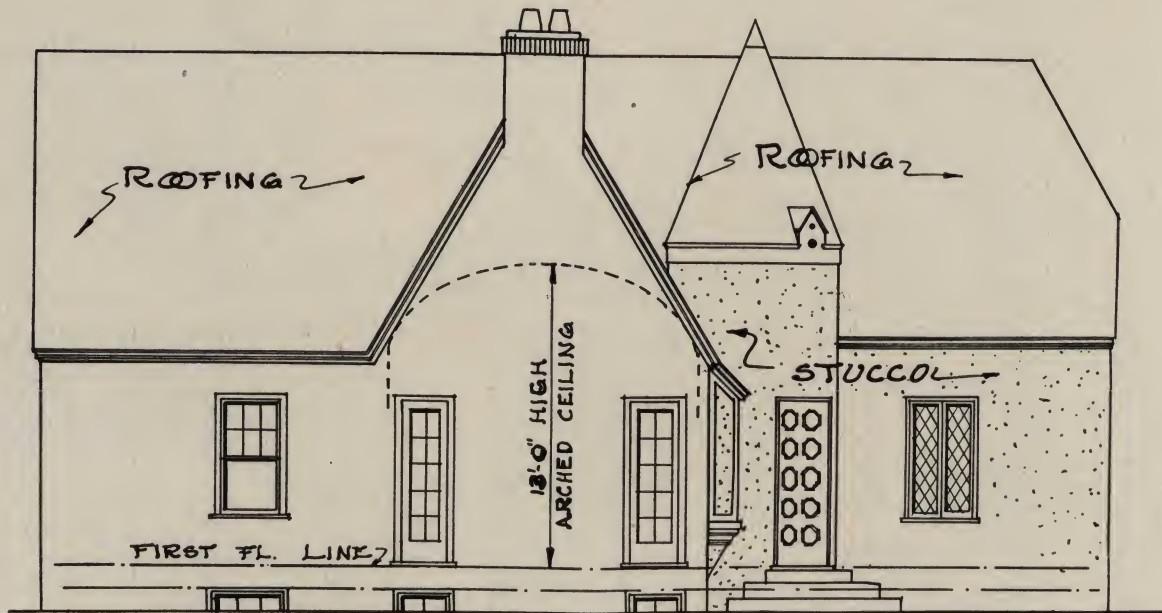
**THE ALTURAS:** This Main Floor Plan Shows the Wonderful Convenience and Cheerful Livability of the Norman Cottage Pictured on page 58.



**THE ALTURAS:** The Basement of this Norman Cottage Gives an Unusually Good Separation of Laundry and Heater Space.



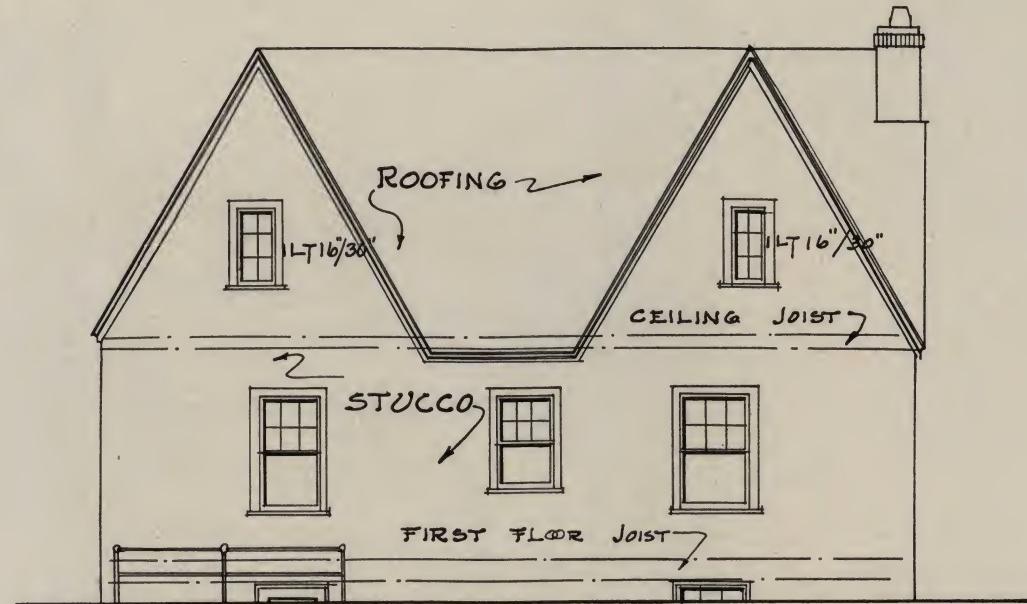
FRONT-ELEVATION



LEFT-SIDE-ELEVATION  
SCALE 1/8" = 1'-0"

SHEET-NO-3.

THE ALTURAS: The Elevations of this Norman Cottage Show an Attractive Aspect in Both Directions.



REAR-ELEVATION



RIGHT-SIDE-ELEVATION

SCALE 1/8"-1'-0"

SHEET-No.- 4

# Complete Kitchen Conveniences

THE builder who would be most successful in building for resale must, to a certain extent, be a student of psychology. He should remember that he is selling, not merely houses or apartment buildings. He is really selling more comfortable, enjoyable home life and the desire for this better and more enjoyable living is the real motive on which his prospect will act. Therefore, the builder should select those house designs, materials and convenient equipment which will stimulate the desire of these home buyers. Desire will be aroused in the breasts of these prospects as the builder or his salesmen explains the advantages of this better built and better equipped home. And the builder should always remember when he is planning a new house or apartment building that the public is being educated to—and is demanding—better equipped residential buildings than have been common in the past.

Let us start with the kitchen, and here, particularly, we must consider equipment from the standpoint of the housewife.

The purpose of a kitchen is primarily to prepare food and the cooking range is a primary consideration. While coal and oil stoves must still be used in rural areas beyond the gas and electric lines, gas today is more universally used than any other type of fuel, both for its efficiency and economy. An important feature of economical gas ranges is the manner in which they are insulated. Since heat costs money, economy is gained by preventing the loss or waste of heat; the better the insulation, the better the gas range. This



**The Most Complete Modern Sink Has an Electric Dishwasher Installed in One Compartment.** This convenience removes one of the "bugbears" of housekeeping and helps to make housekeeping easy and pleasant.

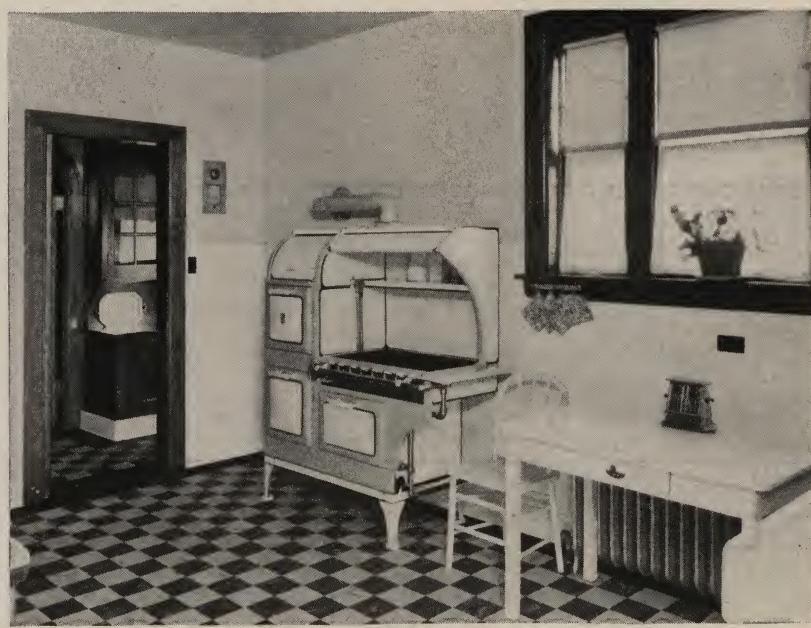
applies particularly to ovens, but the hoods are also being insulated. A gas range is illustrated in this article which is said to be so perfectly insulated that the fireless principle is claimed for it; namely, that it will cook by retained heat after the gas is turned off. As is well known, this method of cooking retains the juices and the flavor better than the direct application of heat and the food is correspondingly nutritious, healthful and economical.

There is a great variety of choice offered to builders and owners in the selection of gas ranges for apartment house, hotel, hospital, club, school, cafeteria and single dwelling use. In addition to insulation, the points to be considered are size, design, burner design, porcelain finish, quality of metal used and such added conveniences as pilot lighting and oven regulators.

The oven regulator automatically shuts off the oven gas at the time set, so that roasts and other foods will get exactly the temperature for the time previously determined to give perfect cooking results. The housewife or her cook may safely absent themselves without danger of burning the food in the oven where one of these oven regulators is on guard.

Some gas range manufacturers are lining their ovens with special rust-resisting metal—an excellent feature in view of the steam from basting water and moisture in foods.

In apartment buildings and small kitchens in single dwellings, compactness and space-



**In the Corner of This Attractive Looking Kitchen Is Seen a Gas Range with Three Ovens Besides the Warming Oven.** There is a deep hood extending completely over the burners and connected with a chimney vent to carry off fumes or odors. This is a very complete and well finished range.

saving are valuable in gas range design. To meet this requirement, some manufacturers offer models which utilize the space beneath the burners in which is fitted cabinet drawers for convenient storage of cooking utensils or dishes. In fact, one design places a small gas range in the central space of a complete kitchen cabinet built around it.

Electric ranges are being used in greater numbers every year and are extremely convenient and clean to use—the use of matches being unnecessary. They are easy to control for any degree of heat desired and there are no fumes to be vented. It is, however, necessary to provide special power wiring with outlet in the kitchen where an electric range is to be installed.

Kitchen cabinets contribute greatly to the appearance and convenience of any kitchen. By establishing a well designed "place for everything and everything in its place," confusion and disorder are avoided, time and steps are saved and housekeeping made more attractive.

Here, too, builders and owners are offered a wide range of choice. Kitchen cabinets can be made of either wood or steel and with every sort of compartment for convenient storage of cooking utensils, flour, spices, flavoring extracts, and similar cooking accessories. They can also be had mounted on casters as portable cabinets or in sections or units which can be mounted up together and extended as desired or as space permits. These separate units are usually for permanent installation attached to the wall.

Special shelving and compartments for dishes and everything used in a kitchen are obtainable. Indeed, many designers take advantage of the very complete storage facilities which may be had in kitchen cases to conserve floor space by eliminating the pantry which would, otherwise, be necessary. This has a tendency to reduce building costs.



Here Is a "Knock-Down" Kitchen Cabinet of Wood Which Comes in Sections, but Is Easily Installed by the Builder. A hammer and screwdriver are all the tools required to assemble and place these kitchen cabinets. They can be adapted to almost any wall space.



This Well Insulated Gas Range Is Said to Cook by Retained Heat with the Gas Turned Off on the Fireless Principle. In addition to the gas saving, there is said to be a substantial saving in the weight and value of the cooked foods.

A special knock-down feature has been introduced in a wooden cabinet recently placed on the market. It is shipped in sections, as shown in the illustration, which the builder can place in position and attach to the wall. As many units

can be assembled in this way as desired and they match and fit into the completed whole. Sections can be extended across under a window and the upper sections attached to the wall on each side, which will often solve a problem of limited wall space. In fact, it is good practice to carefully consider the kitchen cabinet and cases at the time the building is being planned, so that there may be suitable wall space provided where it will make a convenient kitchen. The wooden knock-down units shown are classed as portable because they can be so easily disassembled and repacked, should it become necessary to move them.

Most of the complete kitchen case installations include a compartment for brooms, vacuum sweepers and the like and often include a compartment with folding ironing board. However, these latter are frequently provided and built in as separate millwork features.

No modern house or apartment building is considered complete today without adequate kitchen cases and cabinets, as well as gas or electric ranges and refrigerators. Refrigerators are mechanical or for outside icing.

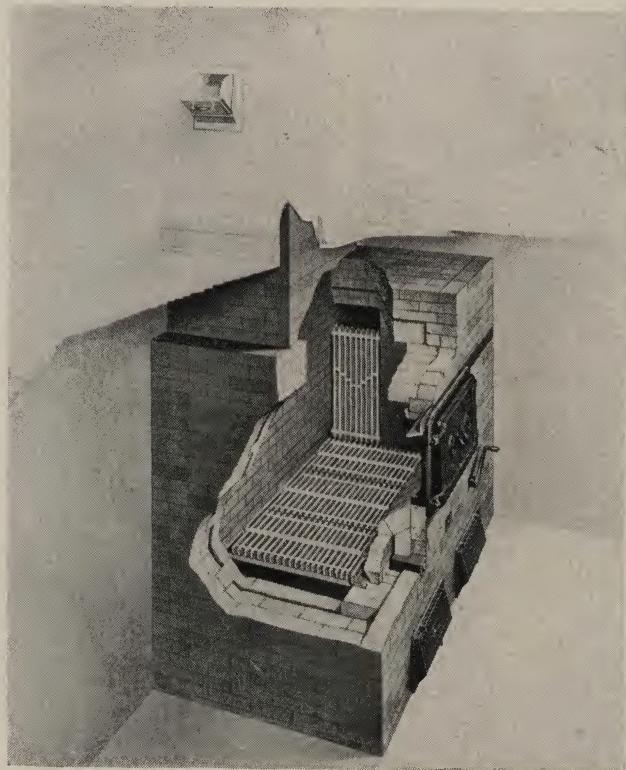
Convenient and sanitary disposal of refuse and garbage is a problem to be solved in every type of residential building. Accumulating garbage is a nuisance and the ordinary garbage can arrangement is scarcely adequate. Heavy metal receptacles to be buried underground are obtainable and this arrangement is neater and more sanitary, as prowling dogs and cats cannot reach it nor are swarms of flies attracted to it.

Immediate burning in an incinerator is an extremely effective method of garbage and refuse disposal and few kitchen conveniences are appreciated more by housewives than the flue type of incinerator built into a special chimney and connecting with grates in the basement. With the chimney-fed incinerator all garbage and waste material is dropped into a handy hopper door in or near the kitchen of a home (or hopper doors on different floors of an apartment building) and falls down a flue connecting with the incinerator in the basement. This consists of a brick combustion chamber with fire brick lining. It is built with a special arrangement of grates and by-pass flue, to provide proper draft control which insures complete and odorless combustion of garbage and waste. The opening into the flue from the kitchen is automatically closed while the hopper door is open to receive refuse or garbage. This device prevents smoke or odor in the kitchen and also prevents back-drafting of the incinerator fire. It is a simple matter for any mason to build the chimney or flue which contains the special incinerator grates and accessories. Blue-prints and full instructions are furnished by the manufacturer of this device.

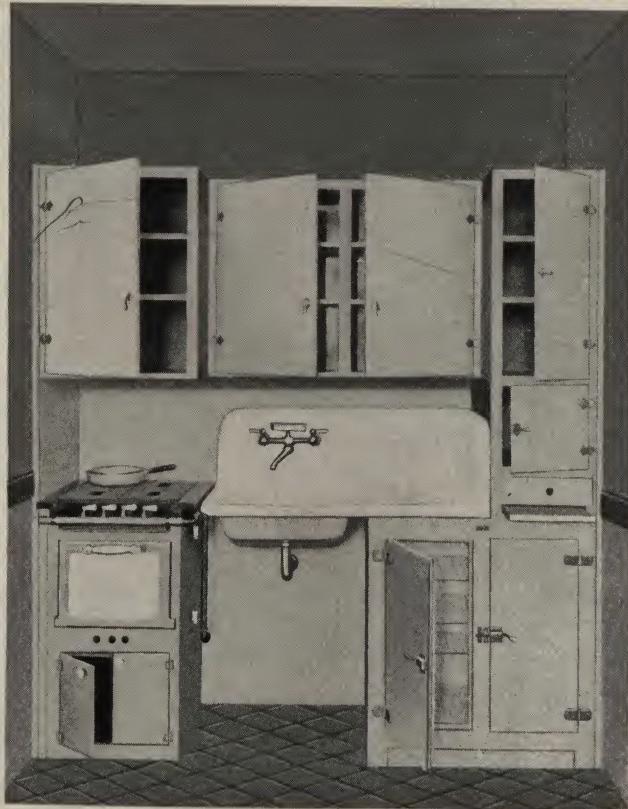
The incinerator is lighted at intervals (a match does it) and the whole mass burns without further attention. Non-combustibles (tin cans and the like) are flame sterilized and dropped into the ash pit for later removal with the ashes. In some incinerators a gas flame dries the garbage and aids combustion, in others the combustible waste deposited is fuel for its own destruction.

When this device was first put on the market, sales were mainly to apartment buildings, hospitals and other large residential buildings, but it is now sold in large quantities for installation in single family dwellings where incineration contributes greatly to easy and convenient housekeeping and the comfort and health of the whole family.

A breakfast nook off the kitchen has been a feature of house design for a number of years and is still popular. Built-in table and seats are integral parts of these alcoves



Cut-Away View of One Make of Incinerator Which Has Grates, Fire Door and Ashpit Installed in the Basement. The refuse or garbage drops down through the flue and is consumed without odor or smoke in the house.



Steel Cabinets Similar to the Above Are Now Being Installed in 271 Kitchenettes in a Large New Apartment Hotel in Chicago. Note the small but complete sink, drainboard, mixing faucet and gas range incorporated in this steel cabinet, thus conserving space in each of the 270 similar suites.

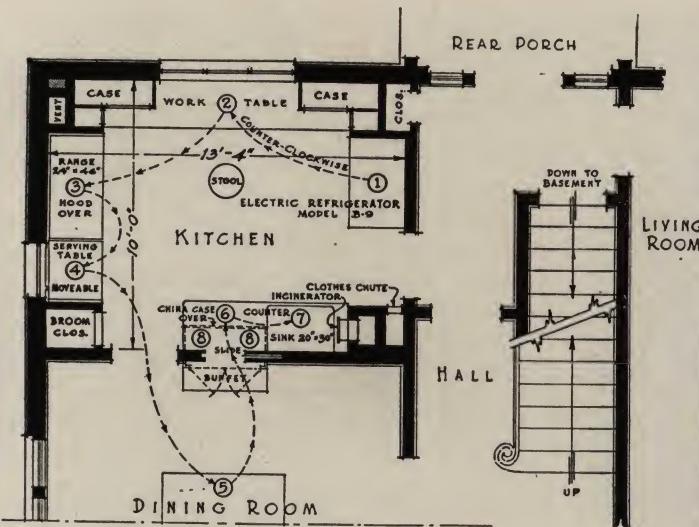


The Convenience of This Incinerator Can Be Appreciated by Looking at the Picture. Garbage, paper or refuse of any description can be instantly disposed of through the hopper doors at each floor above.

and can be had in substantial and attractive millwork all ready for the builder to install. The kitchen, of course, must be well finished, well lighted, clean and attractive where the dining alcove opens off it. This is a feature of American home designs which speaks well for the American kitchen and its attractiveness.

Milk and package receivers are certainly called for under modern delivery conditions. They more than pay for themselves in added comfort and quiet—to say nothing of the wear and tear on the side or back door. Such a receiver is an added convenience when there is no one at home and deliveries have to be made. Meat and groceries left on the back porch are quite apt to be devoured or injured by stray dogs and cats.

Even the kitchen sink—so long a standard article—has started



The Electric Refrigerator, the Work Table, the Range, Serving Table and Sink Make Up a Circuit for Efficiency in Preparing and Serving a Meal.

its evolution towards a higher plane of usefulness. The latest is the electric sink, with an electric dishwasher in one compartment. Even the husband will appreciate this if he has been impressed into domestic service and the average woman will go into raptures over it, for it removes her pet "bugaboo" if she desires to dispense with a maid.

Even without the dishwasher, the compartment sink seems to have come to stay and the old, familiar rattle of the dishpan will be a thing of the past.

Over the sink, a mixing faucet with convenient handle and nozzle is a kitchen convenience which should have been thought of years ago, but has only been available in recent years. Tempered water is more often required than water which is scalding hot.

Besides the wiring and lighting fixtures—and modern

kitchens are well lighted—convenience outlets should be installed for electric irons, dishwashers, etc. Even electrically operated coffee percolators, toasters, and waffle irons, beaters and mixers, while not generally installed by builders, must at least have outlets for cord connection and if an electric range is to be used a special power outlet must be provided.



Kitchen Cabinet Assembly in the Model House at the Indianapolis Home Builders' Show.

Not the least of these electric conveniences and one which builders are finding it profitable to install is the electrically operated ventilating fan, usually set as an exhaust fan in one of the kitchen windows. These fans absolutely eliminate disagreeable cooking odors in the living rooms and keep the kitchen pleasantly cool in the summer time. Indeed, the kitchen of tomorrow bids fair to be one of the most orderly, comfortable, convenient and interesting rooms of the modern household.



The Pullman or Breakfast Nook Is a Worth-While Addition to the Kitchen.  
Lunches served here save many steps.

# A Cristal Garden for the Home

A Small Greenhouse Can Be Added to Any Home at a Moderate Cost and Will Not Only Bring Pleasure to the Owner But Increase the Value of the House

**A**LARGE portion of pleasure for every member of the family is to be attained through the addition of a small greenhouse to the home. At the same time, with a moderate expenditure of money, the value of the house is increased to a proportionately great degree. Almost every lover of home life is a lover of flowers and every lover of flowers has longed for a greenhouse which would make possible an abundance of fresh beauty in season and out.

But not everyone is aware of the fact that a greenhouse is not necessarily a highly expensive luxury, only within the reach of the wealthy, nor that it may be added as a part of a house which already has been built. Such, however, is the fact and expert advice on design and construction is readily available from the manufacturers of greenhouses. This advice includes a designing service to fit the greenhouse addition to the home most appropriately and the furnishing of the entire installation, to be set up by local contract.

Probably the most popular and practical type for the average owner is the lean-to style shown in the illustrations. This style of greenhouse involves the least expense for both construction and heating and establishes the indoor garden as an integral part of the home. It may even be used, like the one pictured on the next page, as a sun room dedicated to the better health of the family. This particular sunroom was built by a doctor, as an addition to his home, and serves the same purpose as the sunroom

of a sanitarium, except that it is the "ounce of prevention" which is better than the "pound of cure."

While the type of construction to be seen in both photographs and the drawing, known as the semi-curvilinear, is the preferred style, there are also other styles available from which to choose. The semi-curvilinear design, however, has the advantage of permitting a wider range of use because of the high side walls and more flexible ventilating system; and many think the gutter at the bottom of the eave curve gives a decidedly improved architectural emphasis.

Until ten years or so ago, greenhouses were largely constructed with straight roof lines, quite like other buildings, or with long sweeping curves, called curvilinear. The former were a bit severe while the latter tended rather to the other extreme. Later a roof was designed to come midway between the two, by curving the eave line and carrying the roof straight from there up. This was called the standard curved eave construction. The effect is highly pleasing to the eye and from a growing standpoint, the gardeners claim that it has a decided advantage over the older types.

With the ever increasing demands for greenhouses so constructed that any one compartment will grow violets or roses equally well, gardeners stated that the ventilation from the wall vents in the standard curved eave houses was not practical for some plants. They also complained that the sides were too low for the taller stemmed plants.



Any Home May Have Its "Crystal Garden" Since a Small Lean-to Type of Greenhouse, Such as This, Is Within the Means of Most Home Owners and Will Add Much Not Only to the Enjoyment of the Home But Also to Rental or Sales Value of the House.



A Lean-to Greenhouse Added to the Home by a Doctor Who Saw in It an Aid to the Health of His Family Much as Sun Rooms Are Used in Modern Hospitals.

To overcome both of these objections the gutter was put back again at the eave, as in the straight roof houses, and broadening the sweep increased the height of the curved portion above it.

A continuous row of ventilating sash was hinged to the under part of the gutter, giving an abundance of air under perfect control. The resulting house, which is the semi-curvilinear type, makes the ideal all around greenhouse.

All of the types of house, mentioned in the preceding paragraphs, may be obtained if desired and each will be found particularly suitable under special circumstances and for special purposes. In addition high sided curvilinear houses are often used, especially in combination with other units, in the large greenhouses. They are particularly adapted to serve as palm houses and are most often used for this purpose.

Where it is not desired to combine the small greenhouse with the residence, it is quite frequently built in combination with the garage. This is a very satisfactory arrangement. It forms a combined building which easily can be made a most attractive feature of the home grounds and also simplifies the heating problem of both garage and greenhouse.

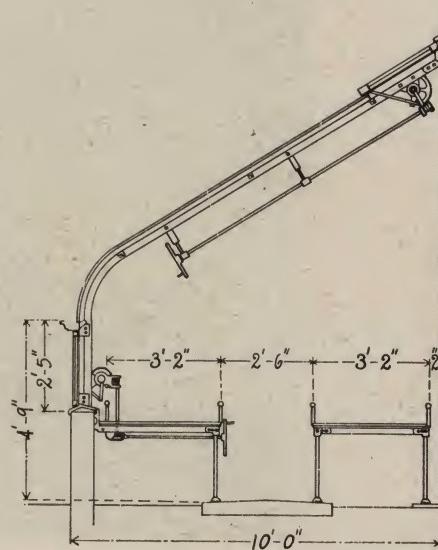
Greenhouse heating is a special subject, so radically different from dwelling house heating that it requires special expert advice to be handled properly. In a residence the piping runs vertically, which gives all the advantage of gravity, to insure rapid circulation. This is not so in the greenhouse with its horizontal piping and difficult problems in proper grading, size of mains and methods of connecting and the proper layout to insure rapid circulation in all parts of the system.

Then, too, there is the matter of correct valving to control the temperatures in various compartments of the larger houses and the question of temperatures required for growing flowers, vegetables, or fruits of all kinds. In short, a thorough knowledge of greenhouse requirements and the ability to put that knowledge to practical use is essential in designing and building the greenhouse. For this reason greater satisfaction and great economy can be secured, when building even the smallest greenhouse, by securing the co-operation of an established manufacturer specializing in greenhouses.

The proper method of securing the expert aid is to supply the manufacturer with a photograph of the house, if the greenhouse is to form an addition to the house, and with a plan of the house. If it is to be a detached house then a plan of the grounds should be supplied and a photograph may be of assistance in securing a balance and harmony of grouping. The manufacturer will then supply the design which is most suitable, the greenhouse complete with all parts ready to be set up and connect with the heating plant. The instructions and plans furnished will make it possible for the local contractor to handle the construction in a most satisfactory manner.

As has already been suggested, flowers are not the only thing which the greenhouse makes possible for the home owner. With it, fresh vegetables of almost any kind can be had throughout the year and also fruits of a perfection not to be found in the ordinary garden product.

With the small lean-to greenhouse, suitable for the average home, there is of course a limit to the number and variety of plants, vegetables and vines which can be raised at one time but even so, to one not familiar with greenhouses, the capacity of even a small one will prove surprising. This capacity may be still further extended by well controlled rotation of plants and the use of cold frames and hot beds as adjuncts of the greenhouse and garden.



The Semi-Curvilinear Type of Greenhouse Is Probably the Ideal All-Around Type for General Use.

# The Lowell

An English Cottage Which Presents An Inviting Front Backed Up  
By An Equally Attractive and Convenient Interior

(For perspective in full colors see page 75.)

WITH its walls of clapboard, laid with wide exposure to the weather, extending down to the grade level, its large, plain but handsomely proportioned chimney and its attractively designed entrance, this charming English cottage seems almost to have sprung from the ground on which it stands, so much a part is it of its surroundings. The combined cement and brick walk and drive, as well as the entrance with its low brick steps, present an invitation to all who approach and even the garage, harmonizing with the style of the house, carries decorative rather than a utilitarian tone.

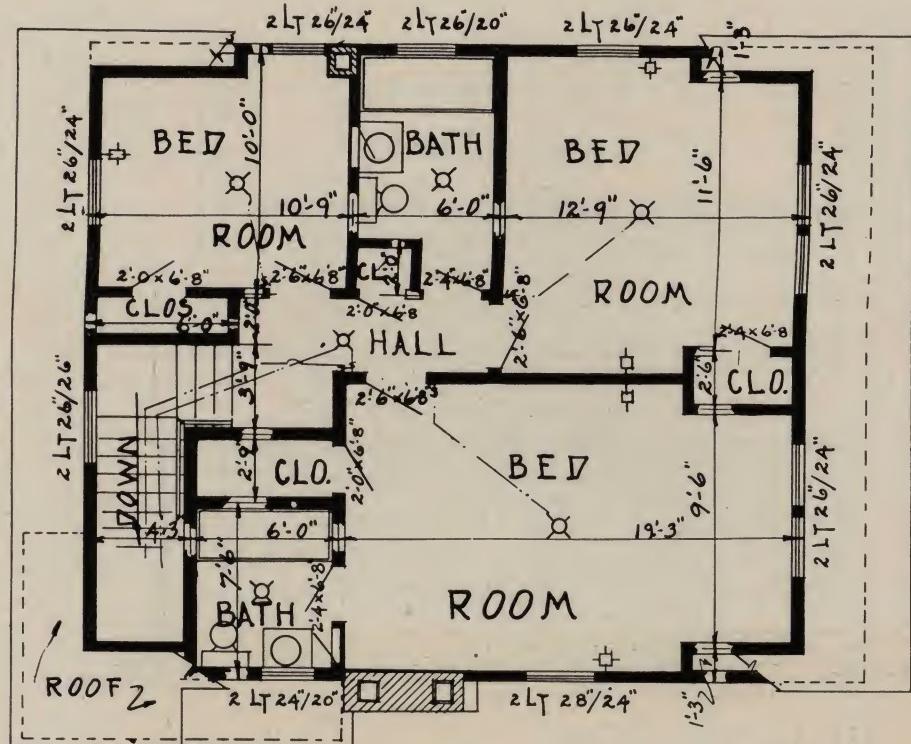
No less satisfactory is the interior, as will be seen by an inspection of the plans and elevations shown on the four

pages which follow this. There are six rooms, in addition to a sun parlor and enclosed porch. The arrangement has been planned with due consideration for compact and convenient grouping and such a house would be most easily cared for. Besides the sun parlor and porch, there is a living room, dining room and kitchen on the first floor, the latter being reached by a service entrance at the side as well as from the reception hall.

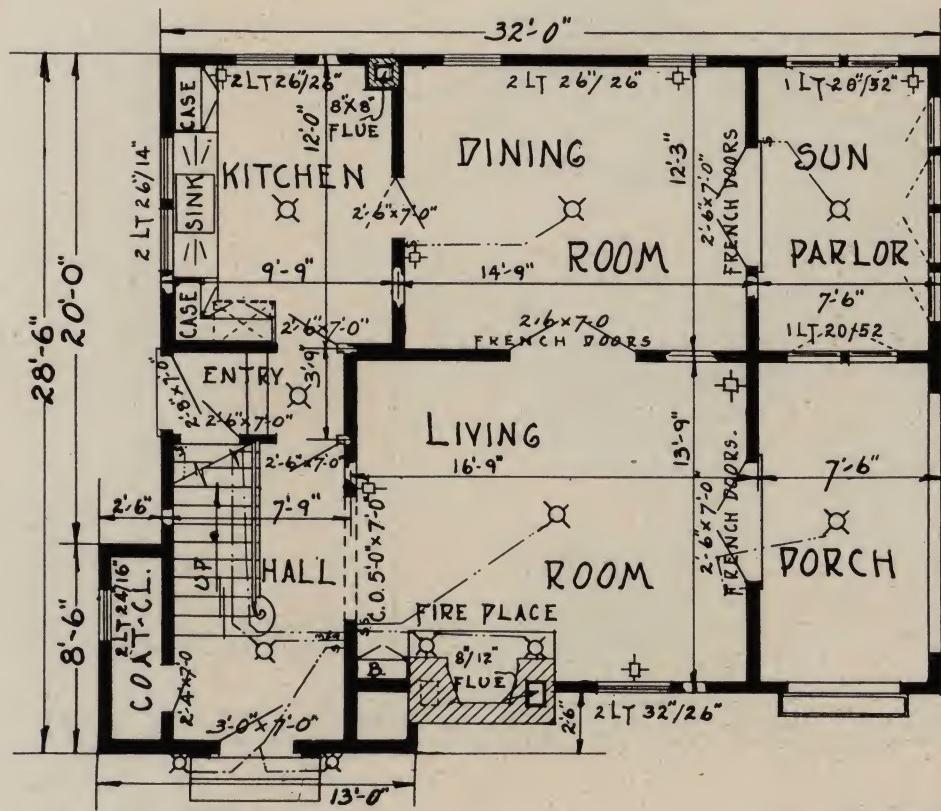
The reception and stair hall is provided with a large coat closet and leads into the living room where is found a fireplace with an unusual location near one corner of the room. Living room, porch, dining room and sun parlor are all separated by French doors.



A Dining Room Tastefully Furnished and Provided with a Light of Grace and Beauty.



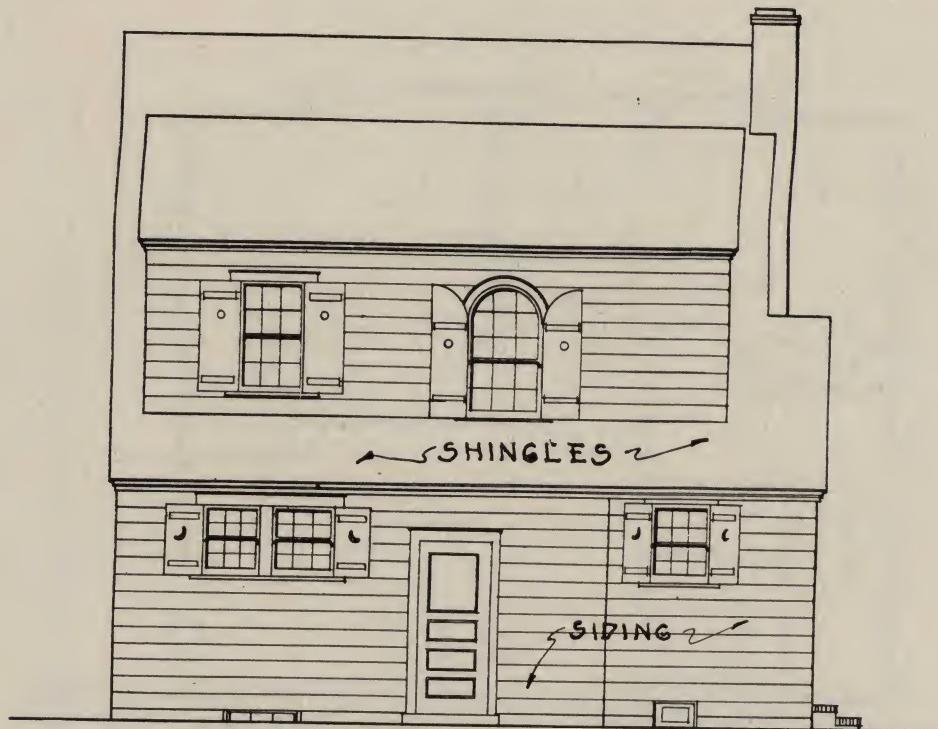
SECOND  
FLOOR  
PLAN



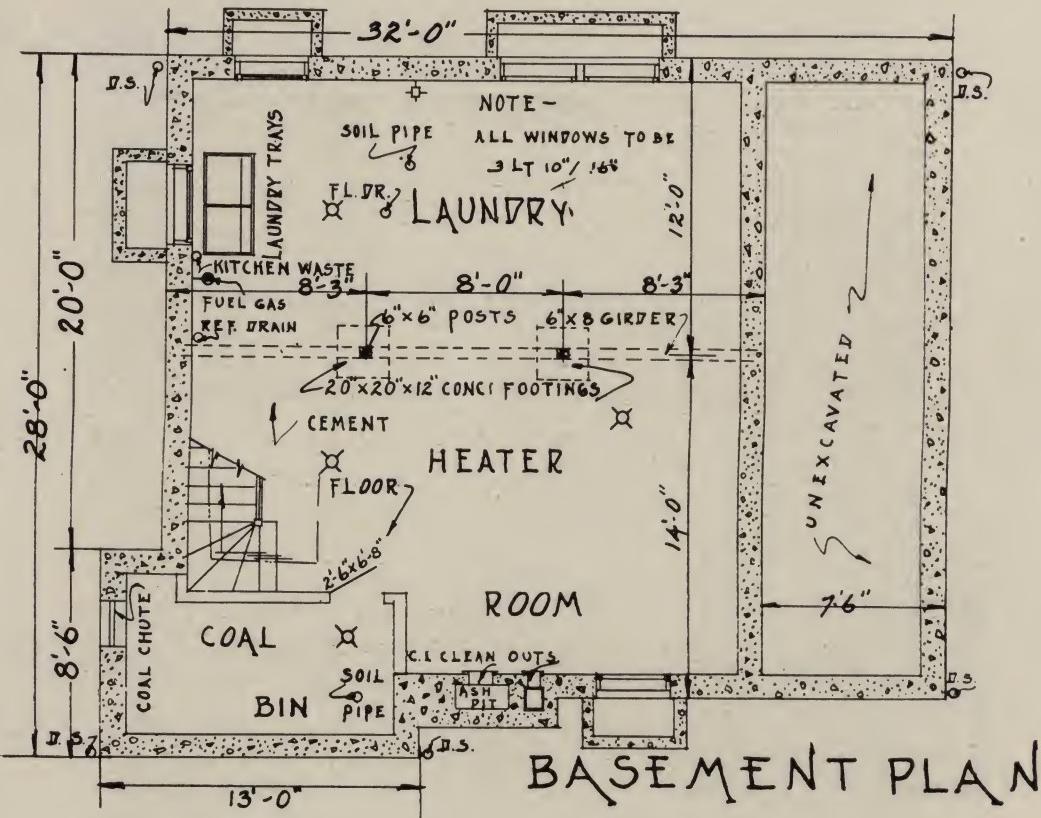
FIRST  
FLOOR  
PLAN

SCALE  $\frac{1}{8}$ "=1'-0"

SHEET NO- 1



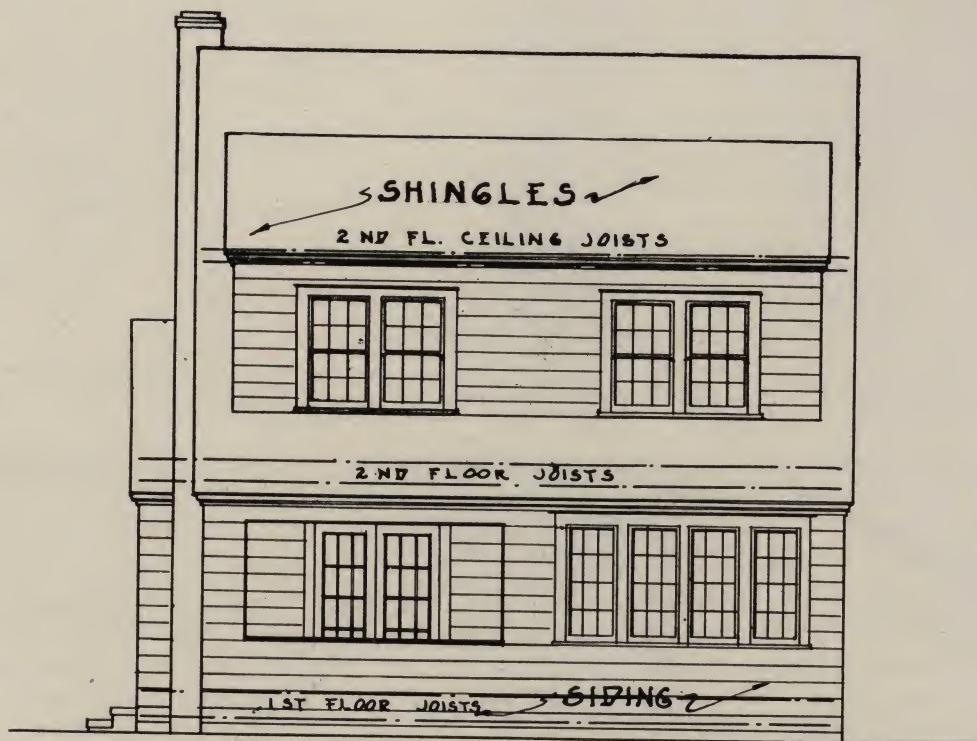
## LEFT SIDE ELEVATION



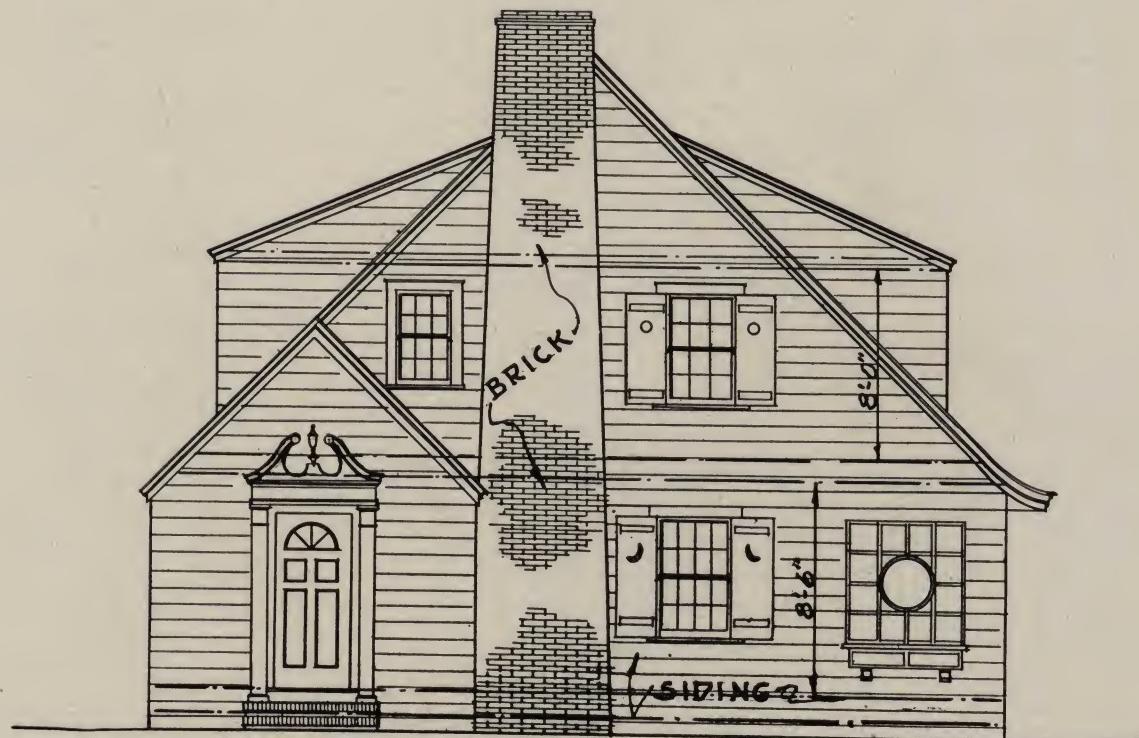
SCALE 1/8" = 1'-0"

SHEET NO-2 -

**THE LOWELL:** Even the Basement Is Well Arranged and the Left Elevation Gives An Interesting Idea of the Shutters and Side Entrance, While On the Next Two Pages Will Be Found Other Elevations and Details.



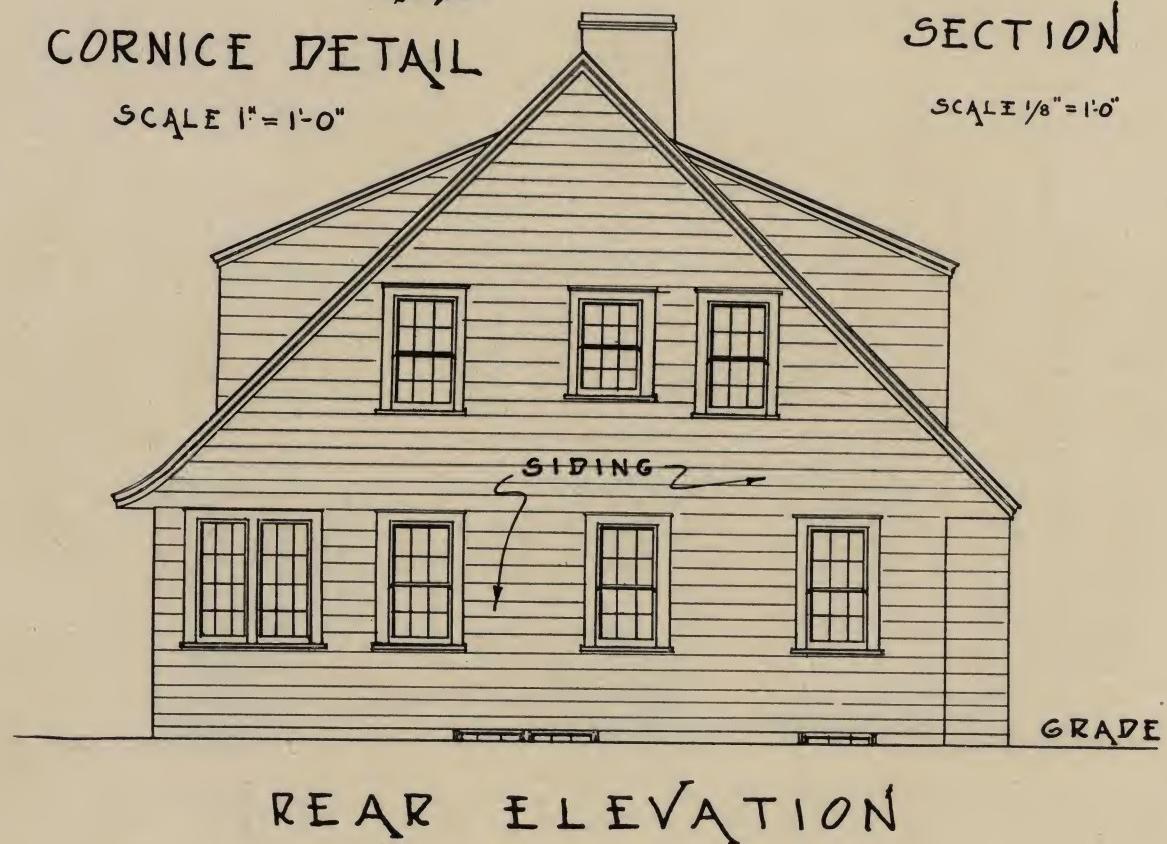
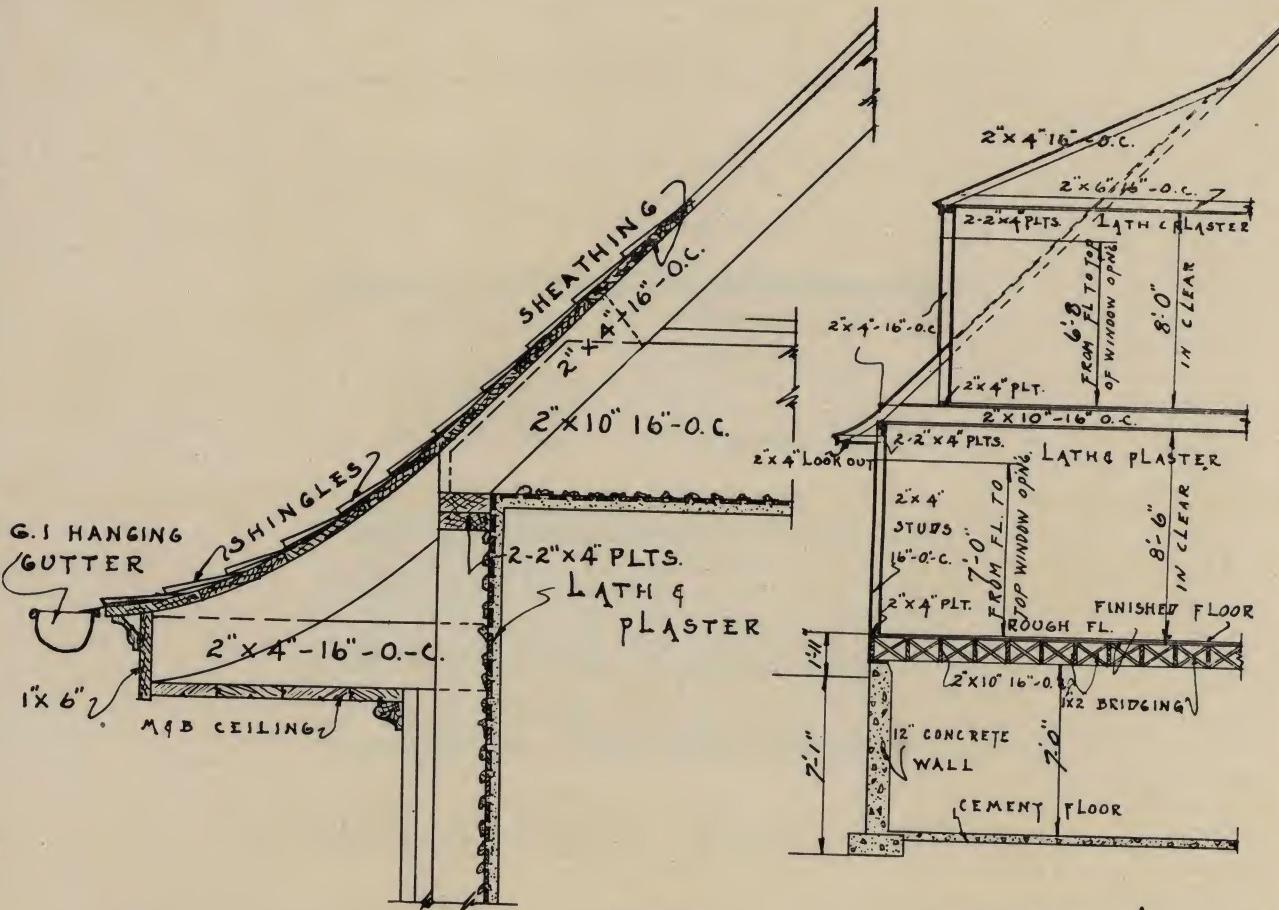
RIGHT SIDE ELEVATION



FRONT ELEVATION

SCALE  $\frac{1}{8}$ "=1'-0"

SHEET NO- 3



SHEET NO-4

## *The LOWELL*

A DELIGHTFUL English Colonial Design. For Complete Building Plans—Working Drawings to Scale See Pages 71, 72, 73 and 74.





## *The KEYESPORT*

A QUAINT English Design Com-  
bining Shingles and Stucco.  
For Complete Building Plans—Work-  
ing Drawings to Scale See Pages 78,  
79, 80 and 81.



# The Keyesport

Interesting Combination of Shingles and Stucco Feature This Seven Room Cottage

(For perspective in full colors see page 76.)

**A**N interesting combination of shingles and stucco is seen in the home illustrated on page 76 with brick used also, to add an ornamental touch to the steps, entrance and chimney. This house is placed upon a low terrace and the front wall is carried clear to the ground level. There is a recessed entry through an attractive arch above which is placed a lamp serving the double purpose of utility and ornament.

A charming feature is the arched doorway, at the right of the entrance, the low wooden gate of which opens onto the porch. At the opposite side of the house, opening off of the

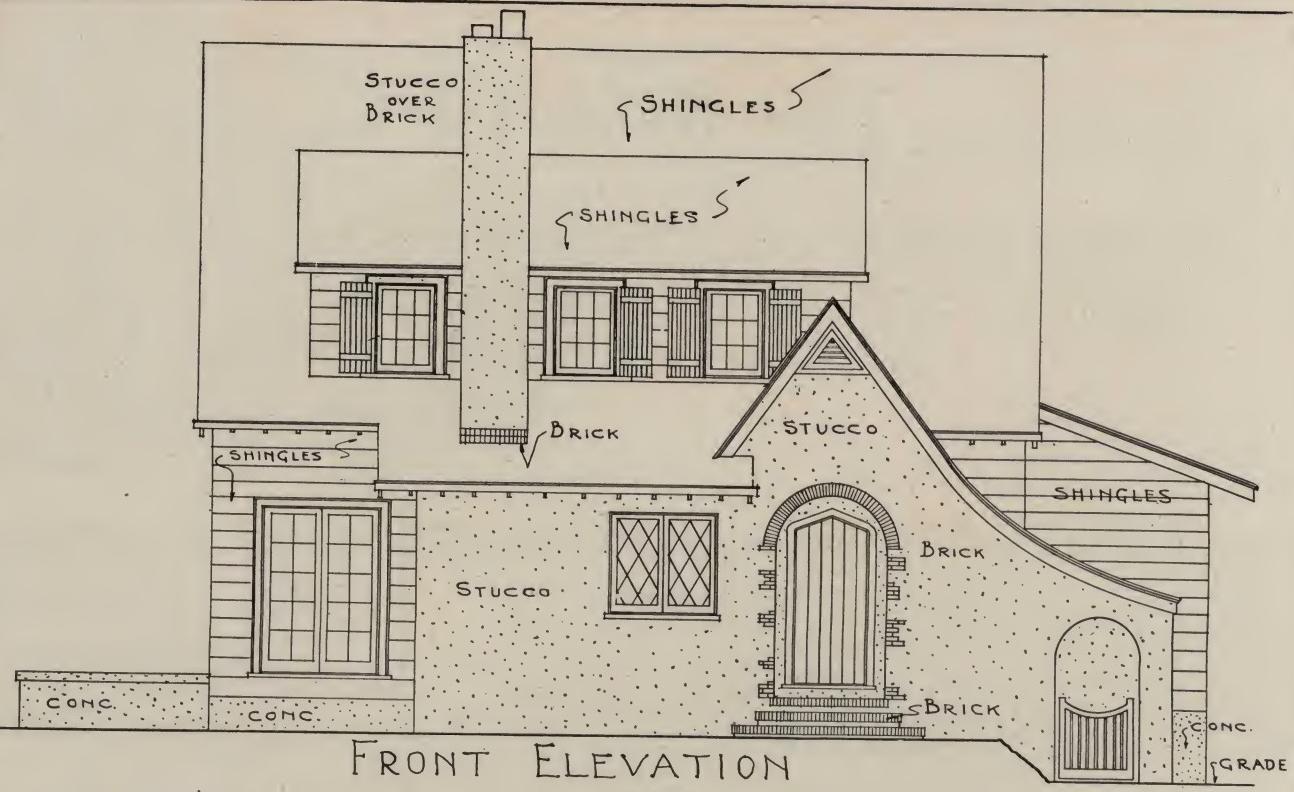
living room, is a larger terrace, raised slightly above the ground level and making no pretense at roof or pergola.

The floor plans show a well thought-out arrangement of rooms with one bedroom and a bath on the first floor. Three other bedrooms and a second bath are found on the second floor which is reached by a stair leading from the reception hall. Each bedroom is supplied with an ample closet and on the upper floor there is an additional closet of unusual size in the hallway.

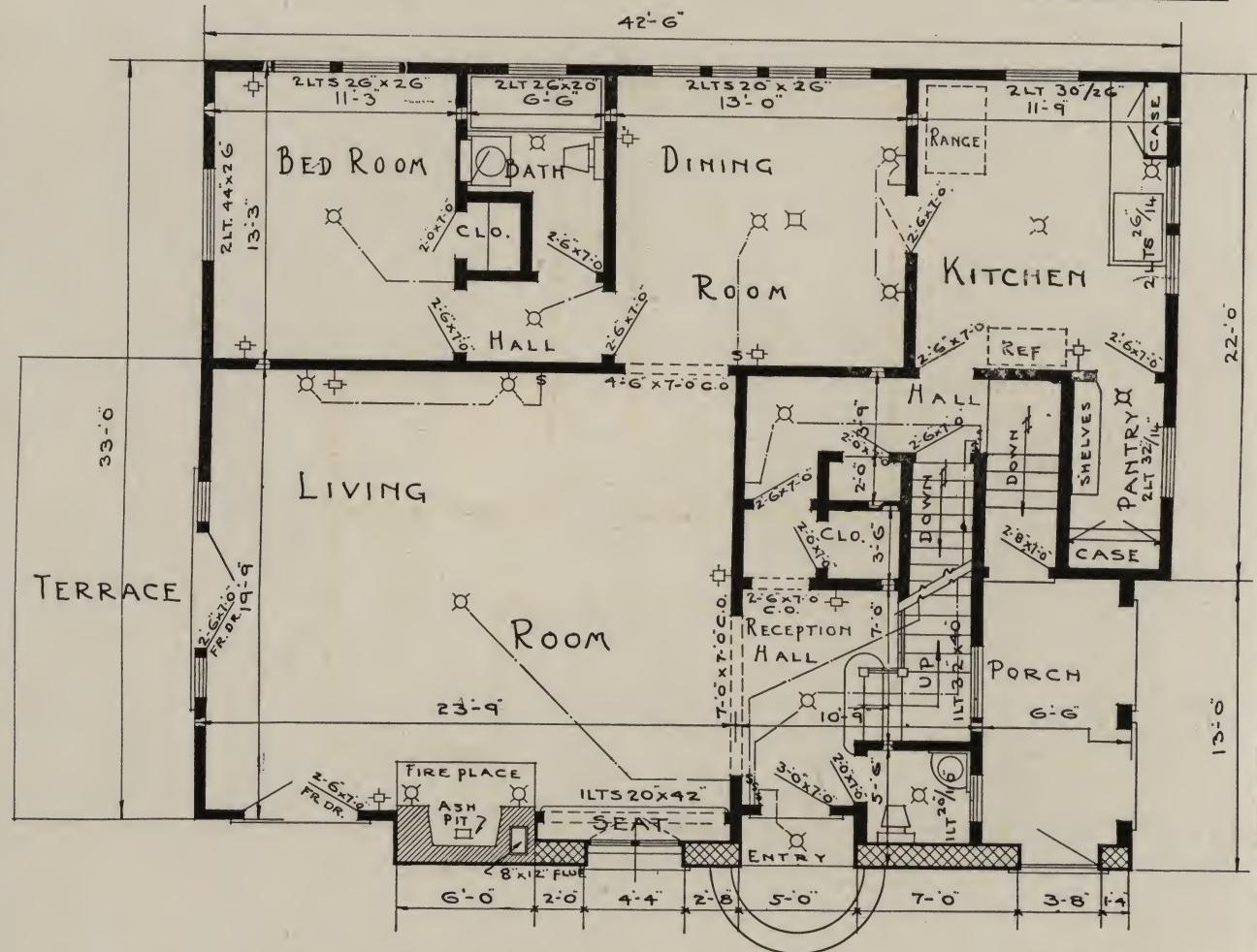
Floor plans, elevation drawings and sectional views of this Front Cover Home will be found on the four pages following.



Photographic Suggestion for a Dining Room Connected with the Living Room by Folding Doors. This room is decorated with appropriately chosen wall paper giving a painted tapestry effect. The individual lights on the central lighting fixture each have shades and there is an elaborate torchere on the buffet.



FRONT ELEVATION

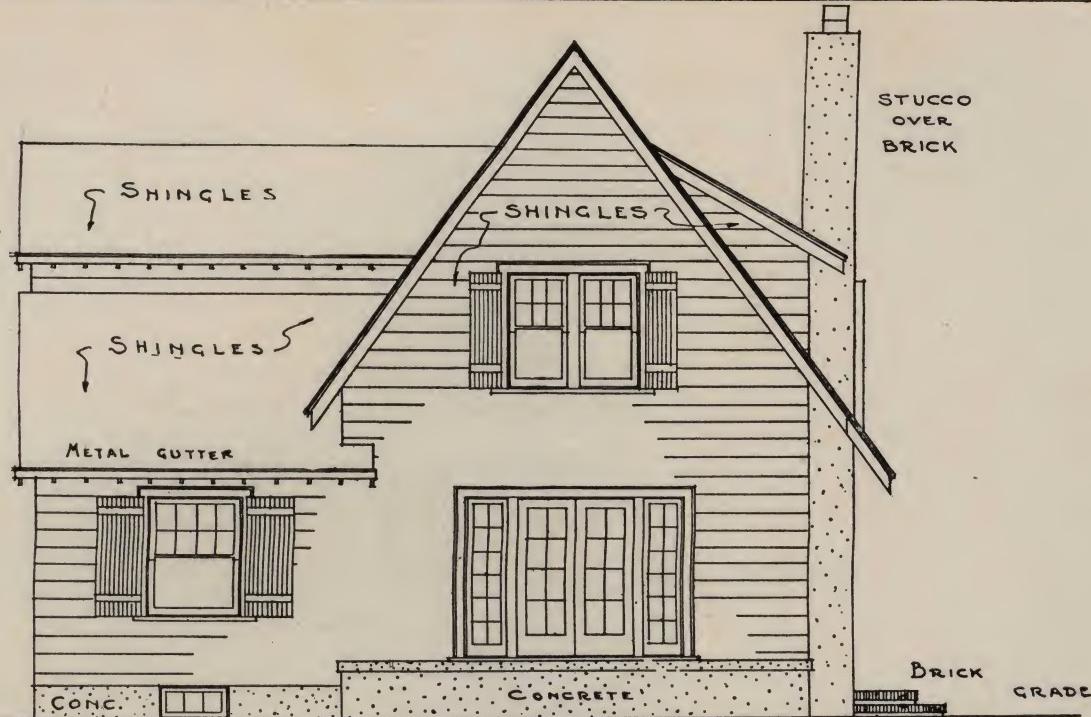


SHEET NO. 1

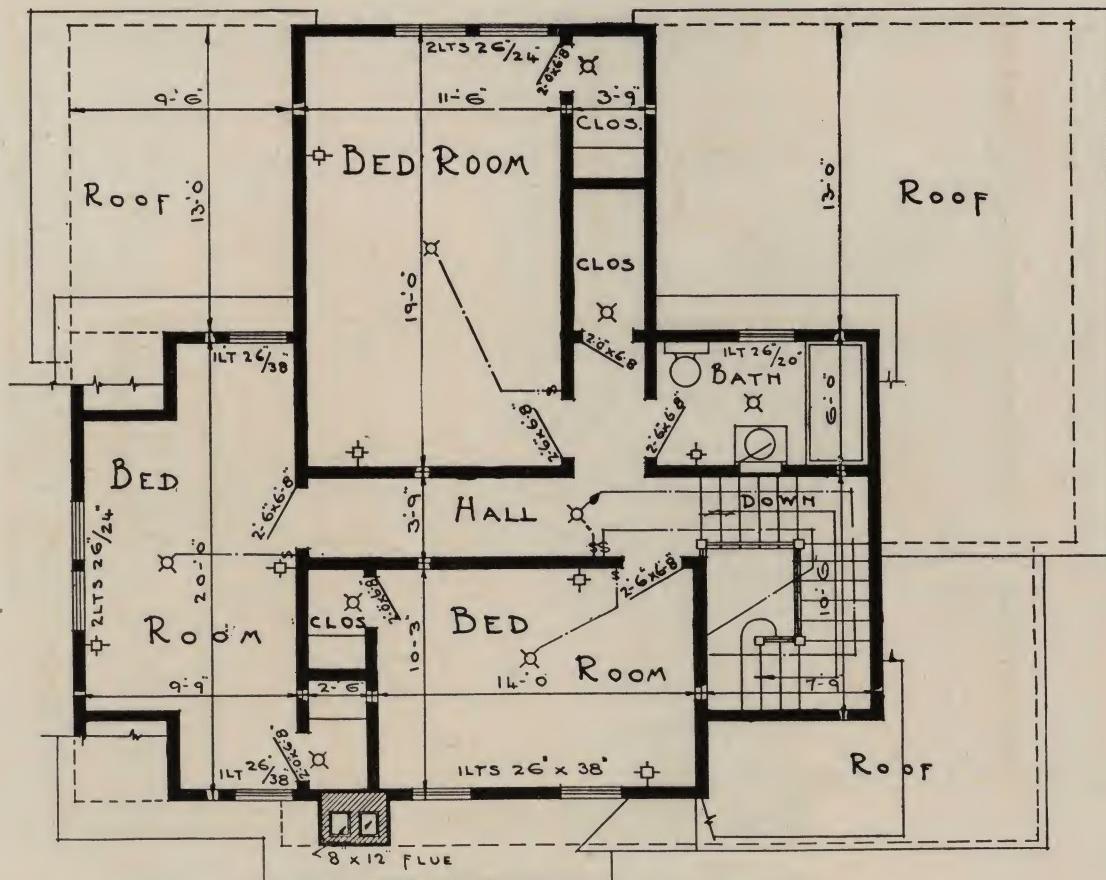
## FIRST \* FLOOR \* PLAN

SCALE 1/8-1'-0"

THE KEYESPORT: Here Are the Front Elevation and First Floor Plan. The plan shows a most convenient arrangement which will save many steps for the housekeeper who must do her own work. On the next page the arrangement of the second floor will be seen.



LEFT SIDE ELEVATION

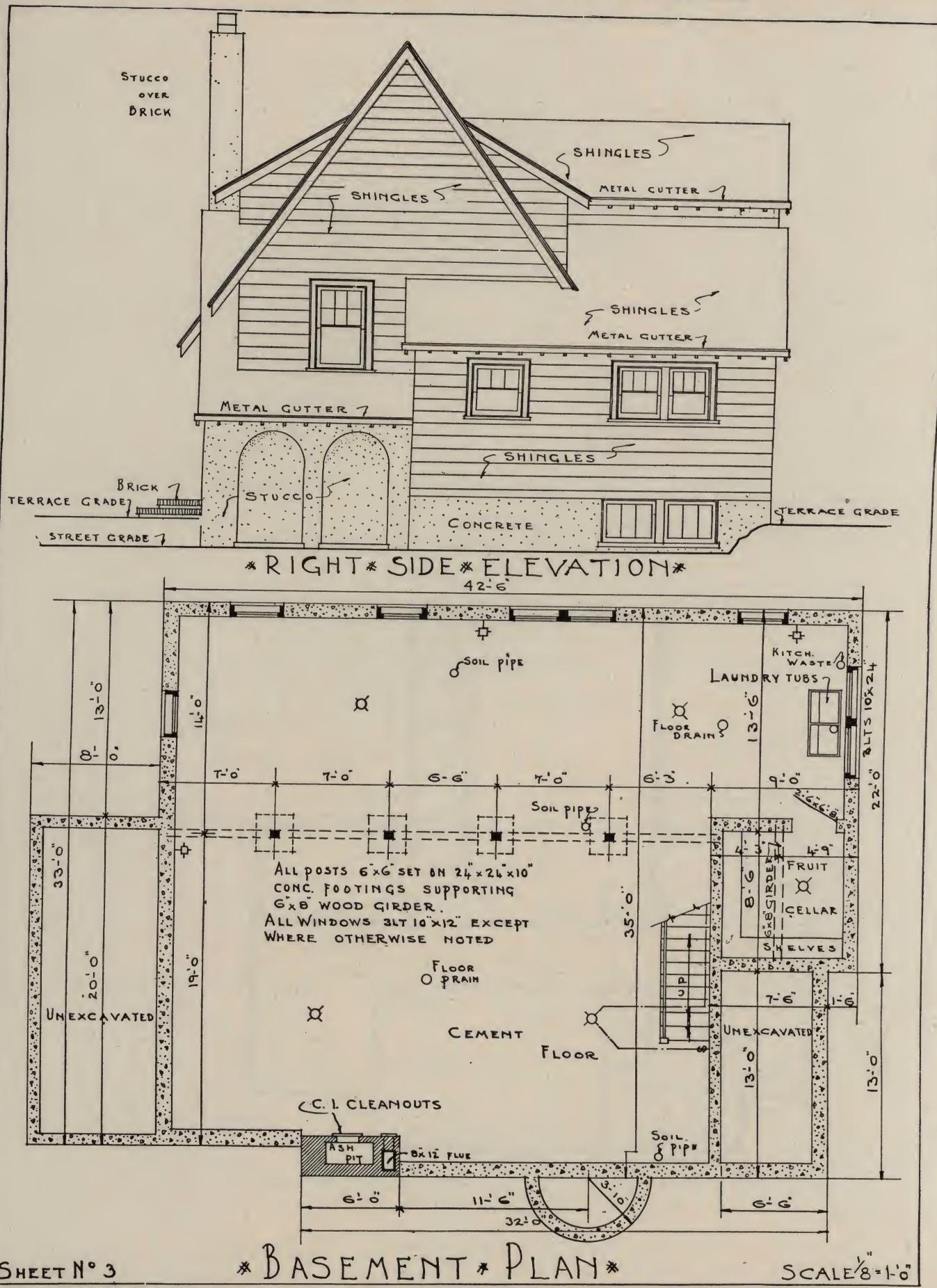


SECOND FLOOR PLAN

SHEET N° 2

SCALE 1/8 = 1-0

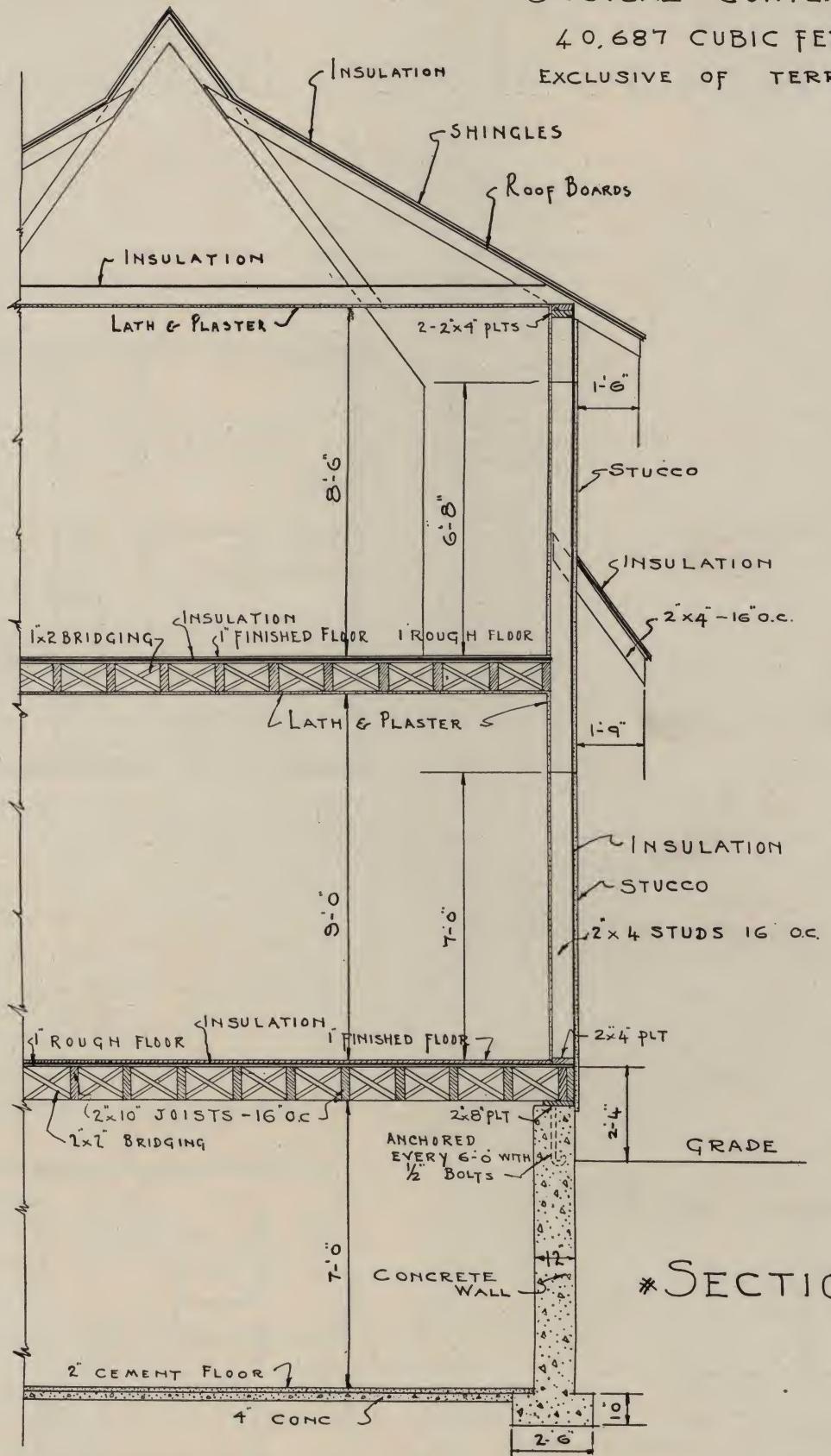
THE KEYESPORT: Left Side Elevation Shows the Handling of the Terrace Which Opens Off the Living Room, While the Second Floor Plan Displays An Effective Utilization of the Space Available Above Stairs.



**THE KEYESPORT:** Handling of the Porch and Grading Are Shown in the Right Elevation. The basement plan shows the provisions for a clean laundry space and convenient placing of heating plant and fuel supply.

## CUBICAL CONTENTS

40,687 CUBIC FEET  
EXCLUSIVE OF TERRACE



SHEET NO 4

SCALE 1/4" = 10'

THE KEYESPORT: This Sectional View Shows the Wall Construction With Full Details Including the Provision For Insulation of Floors, Walls and Roof.

# Building Costs and Limited Space Require Modern Bedrooms

**N**OW, builders can sell six-room homes with the spaciousness of eight rooms at a saving of \$1,000 a room. The modern bedroom must be light and cheery and above all sanitary. It must contain a comfortable bed—a sanitary bed. High building costs, however, require that in order to build fair-sized rooms, they be designed to give the utmost in service and be efficient as well as attractive. Rooms used only eight hours out of 24 do not pay, but 24-hour rooms certainly will.

Modern concealed beds give you 24-hour rooms—rooms that can be transformed from bedrooms into play rooms, sewing rooms, living rooms and sun rooms at a moment's notice. Similarly these same rooms can be made into bedrooms. And the concealment adds to the beauty of the interior in new and pleasing ways.

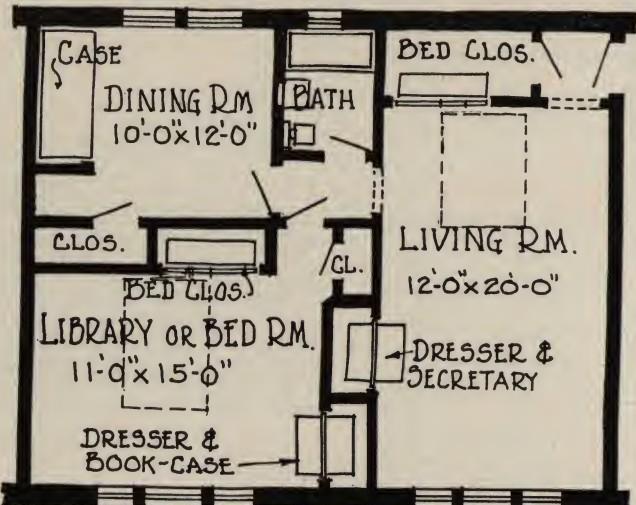
**Large Rooms** are possible with the use of modern concealed beds. They enable the builder to secure in one room all the efficiency of two rooms. In accomplishing this, the builder is not sacrificing sleeping comfort or beauty of the rooms. In fact, he will find whether he builds to rent or to sell, that it will be a distinct asset to build large rooms, as they most certainly are in demand.

A large room, with modern concealed beds, means not only a livable room, but a 24-hour room—a room that is attractive and usable day and night. Large rooms enable you to have—

**Sanitation**—which usually means cleanliness. This is to be had only when the concealed bed installation offers free access to all points at all times for cleaning. There is no place for the accumulation of dust in the modern concealed bed installation. Sanitation, when used with sleeping quarters, is generally used in connection with ventilation. By careful study and development direct drafts have been eliminated in modern concealed bed installations. A modern concealed bed, a sanitary one, located in a position where correct ventilation is had, is one of the best promoters of a comfortable night's rest. To encourage this the modern concealed bed offers perfect

**Operation.** By perfect operation we not only mean an installation that is practically effortless to operate, but one that is noiseless as well as simple and positive in operation.

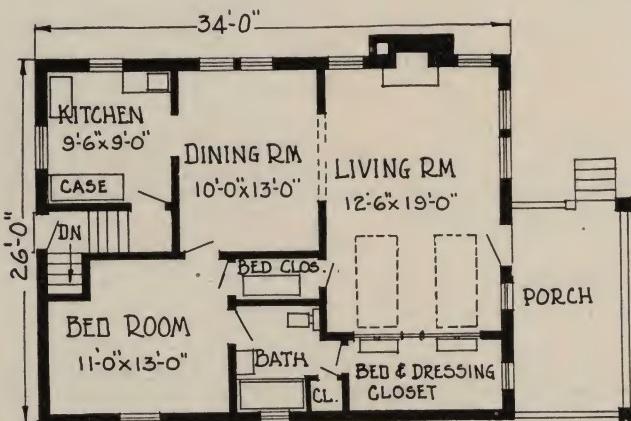
It is fool-proof no matter how slowly or quickly and carelessly the bed may be lowered into sleeping position. It is so designed that it is possible for the bed to come into sleeping position only in the proper manner—and that automatically. The operation of the modern concealed bed is so easy, so simple and positive that it has assisted materially in solving the problem of



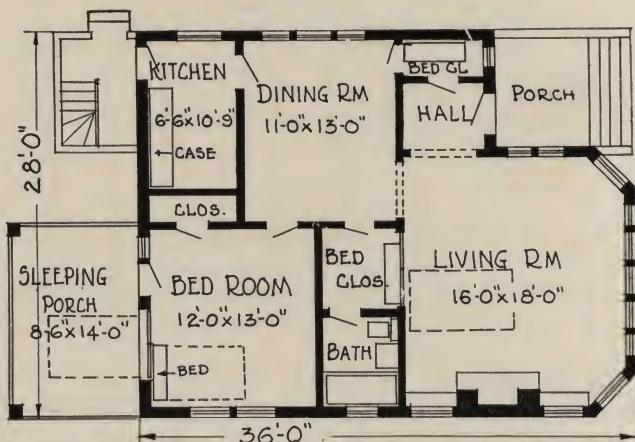
In the Modern Small Apartment the Concealed Bed Makes Possible 24-Hour Use of Every Room, for Each Room Is Made to Do Double Duty.

**The Servant.** Should servants be necessary, however, and it is necessary for them to have sleeping quarters of their own, it is indeed a great step forward to install modern concealed beds in their rooms. This enables the servants to have the privacy of living rooms of their own, which are refined and restful. It has been found that the modern concealed bed has not only made the servant more efficient, due to a comfortable night's rest and better hours, but makes them more content with their surroundings.

In the same way, the use of modern concealed beds is



A Suggested Plan for a Four-Room Bungalow Which, with Its Concealed Beds Gives You the Facilities of a Five-Room Cottage.



Here Again We See How Living Space Is Increased by the Use of Beds Which Can Be Put Entirely Out of the Way in Daytime.

helping architects and builders solve all kinds of space problems. There are many types of

**Concealment**, which can readily be made in many striking and inexpensive ways, doing so in such a manner that the concealment harmonizes perfectly with the interior of any room. It is not always necessary to have a closet designed for the modern concealed bed, but beautiful and effective concealment can now be made with drapes, etc., not interfering in the least with the original layout or design either in furnishings or attractiveness of the room.

Modern concealed beds offer the modern builder an unlimited variety of methods of unusual concealments; whether the doors be paneled or mirrored, or of the French door type, all lend themselves readily to very charming effects. It is very often found that where a room is large and paneled, with beds concealed back of the panels, that

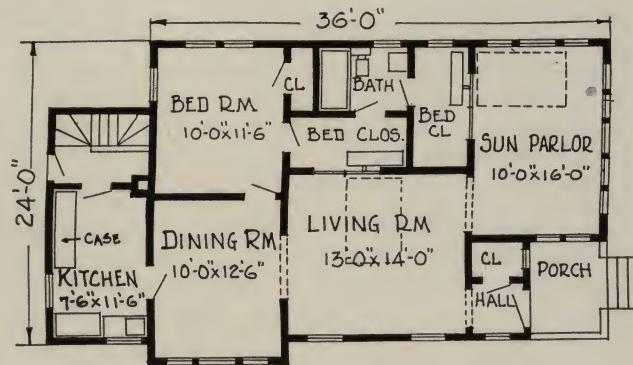
**Quality** usually is a very important factor. For this reason you can now offer your prospects quality in concealment as well as in modern concealed beds themselves. In addition to meeting the economy of present day building costs, modern concealed beds have been perfected and built to "stand up" and give unlimited service, in addition to lending attractiveness to a room. In the manufacture of modern concealed beds quality is uppermost from the time of the purchase of the raw material through the period of making and finally, while not least, through the period of installation. In this manner only is any manufacturer able to place before the builder a quality product.

The honest and experienced builder will agree that his experience and knowledge have taught them that the permanent and satisfactory job—from skyscraper hotel to bungalow—must be built of quality material. The building cost must be economical. And when finished the building must be livable—and to be livable, it must possess

**Beauty.** It is not possible for a manufacturer to design but one or two models and expect them to satisfy the fastidious builder, architect or owner who is anxious to have every item conform strictly with the interior which he so carefully and conscientiously designed. In order that the concealed bed may harmonize with every interior it is abso-

lutely necessary that the manufacturer present to the builder a very complete line both in design and finish, should it be in steel or wood, that it may conform with the building operation under consideration, should it be the most elaborate hotel or the home of a working man, for the

**Cost** can be brought to a surprisingly low point with the use of modern concealed beds. Their installation enables the working man to have a home with all the comfort,



Even the Sun Parlor May Be Put to Work at Night by the Use of the Concealed Bed, and It Makes an Excellent Sleeping Porch with Windows on Three Sides.

quality and efficiency of eight rooms and yet, in all probability, have but the building cost of five or six rooms.

Modern concealed beds are surprisingly low in cost and with them the progressive builder should be able to build for his prospect a home which contains not only two or three bedrooms, with living rooms, dining rooms and kitchens, but in addition a home that has the advantages of a library, den, sewing room, etc., at practically no extra cost.

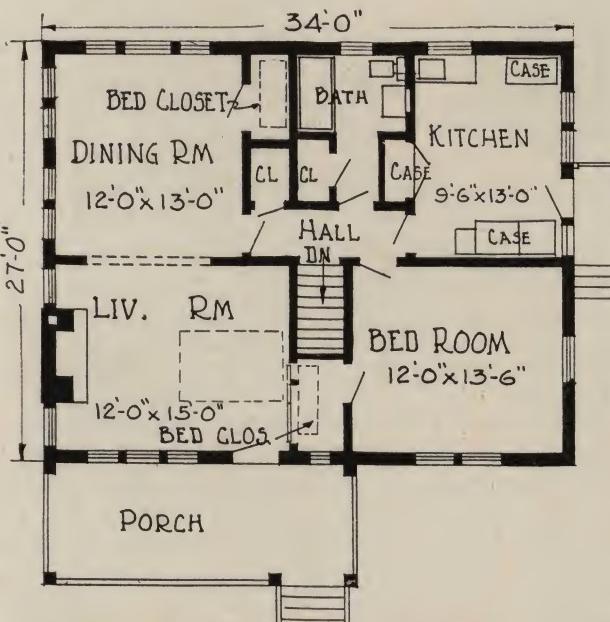
There is no limit to the use of modern concealed beds. They make the children's nursery a play room by day, and the sun room may become a sleeping porch at a moment's notice, the living room a modern bedroom, etc.

**Building Costs** are not prohibitive to offer these comforts even in the homes you plan and build for the working man. We believe that \$1,000 a room is a conservative figure as an average cost of building. If an eight-room house costs \$8,000 and you can build a five-room house for \$5,000, we certainly believe that it is to the interest of every builder to be informed on the improvements offered in the installation of modern concealed beds. Beyond question the builder who can prove that he can build an attractive hotel or home for less than his competitor is bound to get the business.

Builders will find that they can please their prospects by planning and building with economy, yet with up-to-date efficient layouts, which in turn will prove beyond all question that you are progressive and aware of modern conditions and the modern ways in which to meet them.

A service department maintained by the American Builder will be glad to assist you, without obligation, in designing a bed or an installation which will offer a successful solution to your problem.

It will be interesting for you to know that this department is conducted by men who have been recognized as solving some of the most difficult floor plan problems offered by architects and builders in the last few years. Their ideas and suggestions have been gathered from intimate contact with architects and builders all over the country.



With the Arched Doorway Between Living Room and Combination Dining Room-Sleeping Room, the Latter Also Serves as an Extension of the Living, Between Meals.

# Hardware for the Small House

THE small house, designed to be a real home, should be a place of comfort and simple refinement. In order that this shall be accomplished painstaking care should be observed in the choosing of each of the many products that are brought together and built into this house. Usually the most obstinate element to subdue is cost, and because this inconvenient obstacle is forever rearing its head is all the more reason for the exercise of careful judgment in the selection of materials to see that the money to be spent yields the utmost in enduring satisfaction.

It is reasonable to say that for the amount of money spent, no other material entering into the construction of the small house offers so much in the way of utility and decorative possibilities as hardware. Each piece is called upon almost daily to actively perform its duty, and at the same time, if properly chosen, it lends to its surroundings a decidedly artistic effect. For the small house it is not expected that the heaviest will be used—it would not be in keeping. Neither should the cheapest the market offers be selected—it is quite apt to prove unsatisfactory in operation, endurance and design. But between these extremes hardware designed especially to meet the requirements of the small house is made by manufacturers with national reputations, hardware that is well constructed, of good appearance and at the same time moderate cost.

Generally speaking, hardware is made of cast iron, wrought steel, brass and bronze. Brass and bronze are alloys of copper, and in all practical ways are of equal value. Their chief difference is in their color. As we know, the natural color of brass is of a lemon yellow, while bronze is of an orange yellow. Both brass and bronze are used in cast and wrought. Cast brass and bronze may, except for the "front door," be generally eliminated in this case as being unnecessarily expensive for the small house. Iron and steel are subject to rust, while brass and bronze are not and, therefore, retain their good appearance indefinitely. Iron and steel are so successfully plated to imitate real brass and bronze that the average person cannot distinguish the real from the imitation. The best safeguard on this point is to buy from a reputable dealer and rely upon his word.

Each of these metals is regularly furnished in a number of finishes produced by artificial oxidation to give color effects that will best bring out the design and to harmonize with the various woods.

These finishes when well chosen are reasonably satisfactory and contribute largely to the artistic effect.

The front door offers a special opportunity for the expression of individuality and good taste. It is quite worth while to choose for this door a cyl-

inder lock (1). It is heavier and better made than the bit key type (2) and the keys are more convenient to carry. It is now very much the fad to equip this door with a handle and thumb piece (3) instead of a knob. These handles are made of cast brass or bronze in a large range of styles and sizes, and are particularly pleasing on houses of the Colonial type. A handle of the smaller sizes and simple design will be most in keeping. If you prefer a knob and rose (4) instead of the handle, you will be strictly all right and will probably save a little money. If the house be of the Colonial type a brass knocker (5) will materially add to its completeness.

For the interior doors, except in the kitchen, glass knobs with small wrought brass key-hole plates (6), (if the knobs are not too large) give a pleasing effect. About the most that can be offered against glass knobs is their popularity. If you would like to have "something different" a small brass or bronze knob (7) with small keyhole plates will be modest and very good looking and at the same time be "up to the moment" in style.

As bathrooms and toilets are usually done in white, and all the plumbing fixtures are nickel plated, all hardware showing in these rooms when the doors are closed should be nickel plated, and it should be nickel plated on brass or bronze so there will be no chance for rust coming through as would very likely occur if the nickel

plate were on iron or steel because of the dampness common in these rooms. The knobs may quite properly be of opal-glass as they produce a pleasing harmony with the general white surroundings. Locks for the entrance doors to baths and toilets should be made to lock on the inside with a small turn knob (8) instead of a key. The turn knob will always be in place while keys are apt to be lost. These same locks may be had, at very slight additional cost, so they may be opened in emergency by a key from the outside. This is an important feature that will be appreciated by an owner.

The small knob for the medicine closet should match the inside knob of the entrance door.

In these days kitchens and pantries are usually bright and cheery with white paint and to complete the effect white porcelain knobs with nickel plated brass trimmings (9) may be chosen. These white knobs can be indefinitely cleaned with a damp cloth without injuring them.

Fastenings (10) for top dresser doors should be placed low and those for the bottom doors high so they will be within easy reach. For dresser drawers you will find bar pulls (11) much more convenient than the old fashioned drawer pulls because you can take hold of them from the top or bottom with equal ease. Unless the drawer is wide, one pull is better than two as the force to open the drawer is better balanced.

In years past there has been a larger variety of fastenings for double-hung windows than

(Continued, on page 85)

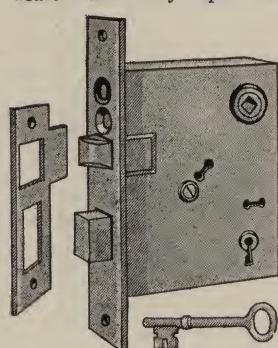


Fig. 2.

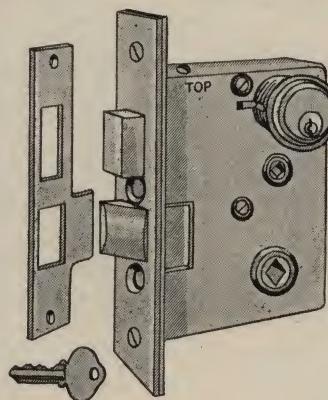


Fig. 1.



Fig. 3.



Fig. 4.



Fig. 5.

# A Colonial Hallway and Stair in the Modern Home

THE builder of this home has kept close to Colonial traditions and yet has not had to fall back upon a single bit of "special millwork" or hand-made items.

Slender balusters and newels and great refinement of all details are characteristic of this type of stair, as is also the mahogany-and-ivory finish. Birch is the wood employed and several other designs of stair parts are available in this material. While the twentieth century compact dwelling does not boast the long hallways and flights of stairs that the revolutionary home did, this modern adaptation reproduces the spirit and the beauty of its predecessor.

Notice the carefully moulded baseboards and stair stringers. The door on the platform gives access to the stair from the kitchen. In design it is pure Colonial, of the six-panel type, and is of white pine with solid raised panels and flush moulding. Similar designs are available with ovolو moulding, and in flat yellow pine laminated panel.

Well-chosen trim is an important factor in the interior finish which is often not given proper attention by home-builders. The curves of delicately moulded trim cast shadows which are part of the decoration. Neatly mitred corners make it a frame for door or window.

The light fixtures used in this hallway are especially good and in keeping with the rest of the house.



## Hardware for Small Home

(Continued from page 84)

of any other one item of hardware, but a few years ago a type of fastener (12) was invented that has gradually, because of its merit, pushed all other kinds into the discard, and it has become the standard for all double-hung windows in all kinds of buildings. This style of fastener is made in several sizes. A medium size should be chosen as the smallest size is too light for satisfactory service.

While it may cost a little more to put on flush sash lifts (13) still the finished effect will be attractive to an owner. Sash bead screws and washers are a convenience and make a good finish.

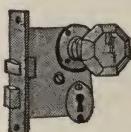


Fig. 6.  
a good finish.

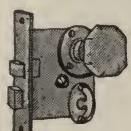


Fig. 8.  
Casement windows usually open out and should be hung on galvanized hinges with brass pins so rust will not put them out of use. There are a number of adjusters or openers on the market, designed to be operated by a handle from the inside. It is best to adopt the one your hardware dealer has tried out and knows to be satisfactory. The fastener may be of a simple but effective kind, something like (14),



In This Hall and Stairway Great Attention Has Been Given to Every Detail of Line and Finish. The result is a highly artistic and harmonious effect.

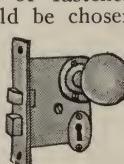


Fig. 7.

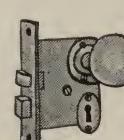


Fig. 9.

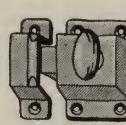


Fig. 10.

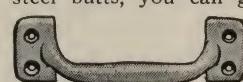


Fig. 11.

which has a handle for drawing the window tight.

For all interior doors in the small house steel butts, plated to match the other hardware, may properly be used, as the higher quality ones of brass or bronze would be rather expensive for this type of house. If you wish something a little better than the regular steel butts, you can get them at a little extra cost with ball bearings. The additional wear will justify the expense.

The illustrations accompanying this article were chosen to represent types rather than special designs. Several of the leading hardware manufacturers can show a number of designs from which suitable selections can quite well be made.



Fig. 12.



Fig. 13.



Fig. 14.

# The Argo

"A Honeymoon Cottage"



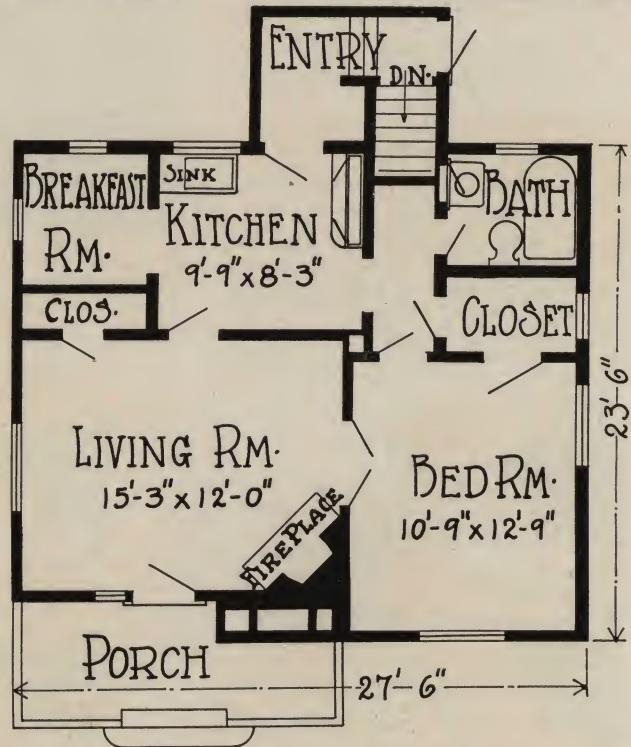
**THE ARGO:** There Is Something About This Tiny House Which Is Remarkably Distinctive and Makes It Stand Out from the Class of Usual Small Homes with an Assurance of Coziness and Individuality Not Often Rivalled.

THIS little home can well be called a "honeymoon cottage" for it was designed especially for a newly married couple and is just large enough to meet the modest requirements of two. Exclusive of the terraced porch and rear entry, it occupies a space but  $27\frac{1}{2}$  by  $23\frac{1}{2}$  feet and is so compactly arranged that it actually offers all the comfort of a much larger home.

The construction is stucco on metal lath. The stucco is of a pale pink tone while the exterior trim is painted a harmonizing blue and the roof is of cement tile in blues and grays. Although so small this house has a style about it that places it far ahead of the usual small house and this style has been largely achieved by excellent proportioning and by the handling of window and chimney details. The windows are of the in-swung casement type with ornamental shutters. The chimney is worked into the terrace and entrance plan and serves a corner fireplace in the living room.

This corner fireplace is a distinctive and attractive feature fitting well with the compact plan. Besides the living room there is a bedroom of comfortable size with a large closet, a bathroom, kitchen and breakfast nook. The latter is used exclusively for dining purposes. At the rear of the kitchen there is an entry with stairs leading to the basement. An additional feature of the living room is an extra closet which might well serve as a bed closet to provide for the emergency when an extra bed is required.

The interior finish of this cozy little home is stained a silver gray. The living room and bedroom floors are of oak while yellow pine is used in the other rooms.



So Compactly Is the Interior Arranged That It Would Be Hard to Believe so Much Living Comfort Could Be Crowded Into So Limited a Space.

## New Plastic Wall Finishes

SEVERAL years ago an entirely new type of plastic wall finish was perfected; and it has so caught the fancy of home builders and of building owners, and has proved so satisfactory and so adaptable in the hands of painters and decorators that we now find the best work all over the country being finished in this method.

Where comparatively smooth finishes are required the material is usually applied by plasterers who are accustomed to handling such finishes. Where the rougher textures are found desirable or where the work is of a two-tone nature made up by applying coats of different colors, the work is usually done by painters. Depending on the type of finish required, the material may be brushed on or troweled on, the texture being worked up while the material is still in plastic condition. Colors are introduced in many ways, including the mixing of pigments with the material before application; the staining of the surface with colored glazes and the introduction of colored sand or other surface aggregate to complete the required design.

It is obvious that with so much variety in the types of finishes, some of which require very little labor and others calling for painstaking surfacing, the full cost of this type of finish varies considerably depending on the desired results. It is quite evident that the nature of this material is such that plaster can often be eliminated with considerable saving. This type of surface requires no maintenance as it is washable and also because most of the finishes present antique effects which mellow rather than deteriorate with age. The exact life of an interior finished in this manner is not known, but it is conservatively estimated that at least ten years may pass by with no maintenance or replacement cost whatsoever. This seems logical because the resultant surface is hard and the colors and texture, being integral, do not need any retouching or refinishing during the life of the wall surfacing.



Mural Executed in Morene in the Savarin Cafe, Pershing Square, New York, by Danish Painters.

This condition would seem to offer special inducements from an investment viewpoint and has been borne out by a recent examination of several interiors finished with plastic materials in an effort to ascertain how they stood the test of the soft coal smoke. It was found that in the antique finishes the discoloration merely added to the effect and the walls required practically no cleaning. In the lighter colored surfaces it was found that the blackening due to adherence of carbon particles to portions of the surface on which condensation had taken place could be corrected by the simple means of washing without damage to the interior finish.

The popularity of this type of interior finish for replacements and in new buildings has grown in an amazing way in the past three or four years. Interiors of this material are to be found in large and small residences in apartment buildings, hotels, office buildings, and this system is particularly adaptable for restaurants, retail stores and show-rooms where unusually effective interiors are desired at moderate cost.

Hitherto the resurfacing of the walls and ceilings of remodeled dwellings and apartments required that they be stripped to the furring or studding. New plaster would not adhere to the old; nor, as a general thing, would it key to the original lath unless great pains were taken to clean out the interspace. This is an expensive operation. It is cheaper to relath throughout.

With the plastic material, on the other hand, it is quite unnecessary to prepare the old walls to any greater extent than to thoroughly cleanse them, removing only the conspicuously defective areas. Even the common plaster cracks offer no difficulty as long as the original coat is solidly keyed to the lath where the cracks occur, since they were then caused by drying out of the wood which has probably long since ceased.

The new finishes can be applied expeditiously and cheaply and, because of their nature, they dry out quickly—a distinct advantage, since the paint can be applied almost at once.



The Louis Sherry Tea Room, French Exposition, Grand Central Palace, New York City. An Example of Travertine marble effect obtained by applying plastic material over fibre board.

# The Ridgeland

Six Room English Cottage with the Comfort and Convenience of a Larger More Pretentious House and a Charm that is All Its Own

(For Perspective in Full Colors See Page 93.)

**A**N English cottage, charming in every detail and radiating a cozy, homelike atmosphere is offered. This house and plan are the sort that grow on one as they are studied and the many features which make for comfort and convenience are realized.

The exterior possesses a satisfying simplicity well set off by the brick terrace, roofed gateway, leaded windows, heavy entrance door and the ornamental ship which spreads its sails so gallantly near the peak of the gale. Rough stucco lends itself admirably to a house of this type and even the lawn and shrubbery leave little to be desired by the family seeking a real home of character.

Nor is one disappointed on entering this house for every hope raised by the promising exterior is more than justified by interior design and finish. The plan gives one the feeling that it is the creation of someone who labored to design a home which would fulfill all his own desires and dreams of the ideal home.

This six room house gives all the room and convenience of a much larger dwelling because of painstaking attention to such matters as many large closets, two bath rooms on the second floor, a sun parlor which is really an extension of the living room, and a breakfast nook which is equally convenient to the kitchen and dining room, but which gives the effect of being entirely separated, a room by itself.

From the brick terrace one enters a reception hall with a coat closet and the stairway to the upper floor. At the rear of this hall is also the stairway to the basement and beside it a door which gives access to the garage, just a step across the walk.

Back of this is a kitchen, the last word in compact, modern design, adjacent to the kitchen is a serving pantry from which a door leads to the breakfast nook. The latter, set into a projection from the house is cheerfully lighted by windows on three sides. Equally cheerful is

the dining room into which it also opens and which is provided with built-in buffet.

The balance of this side of the house is occupied by the living room and sun parlor forming practically one big room about 22 by 14 feet. Returning to the reception hall from the living room, we ascend the stairs to the second floor where we find three ample bed rooms grouped about the central hall.

The two rear bed rooms are of equal size but one is provided with two closets while the other has but one closet. It is a large one, however. Off of the hall is a bathroom and a second bath is provided for the large front bedroom. This room also has a broad dressing alcove at one end and an unusually large closet at the other. All of these rooms are arranged with ample space for all necessary furniture.



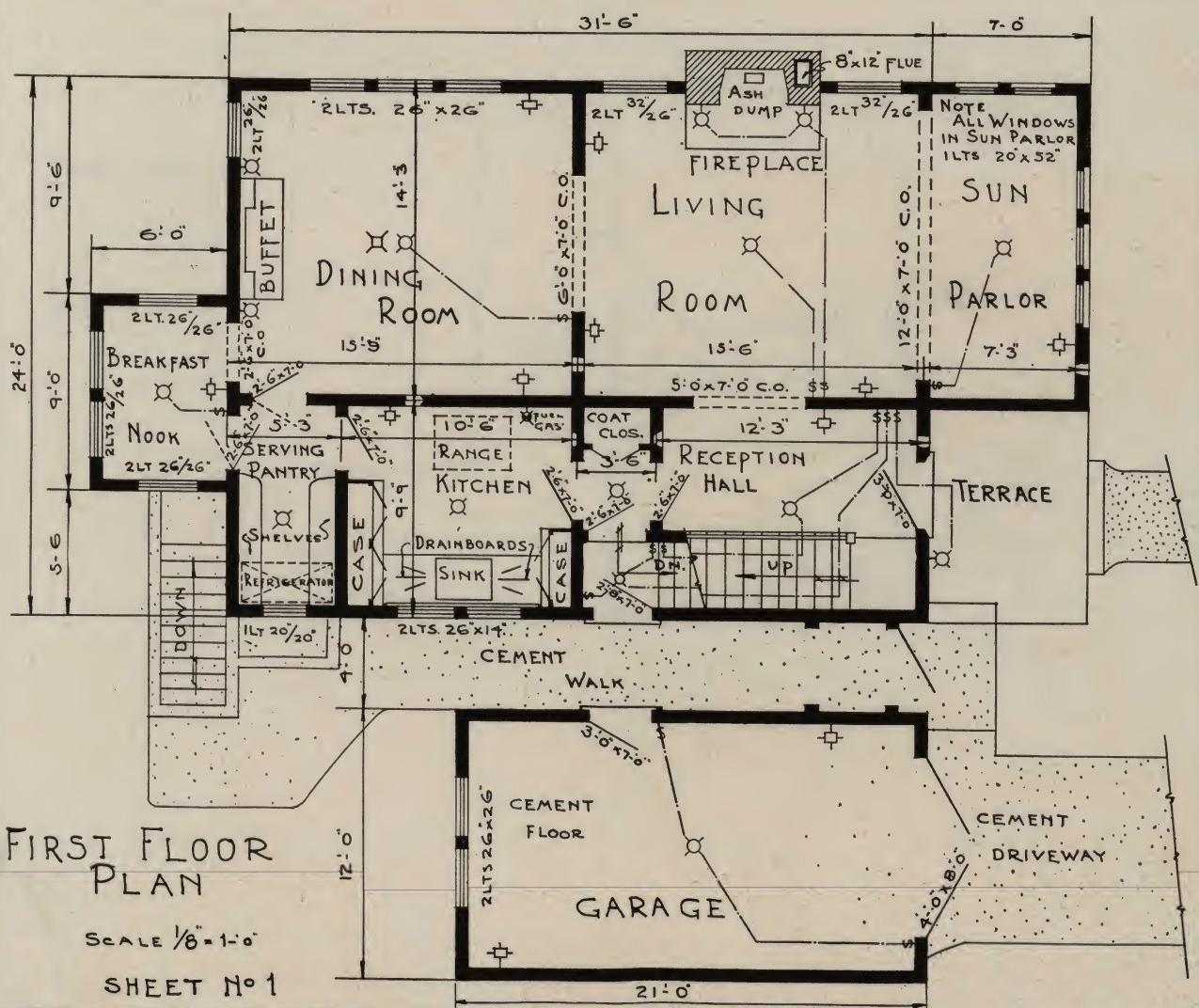
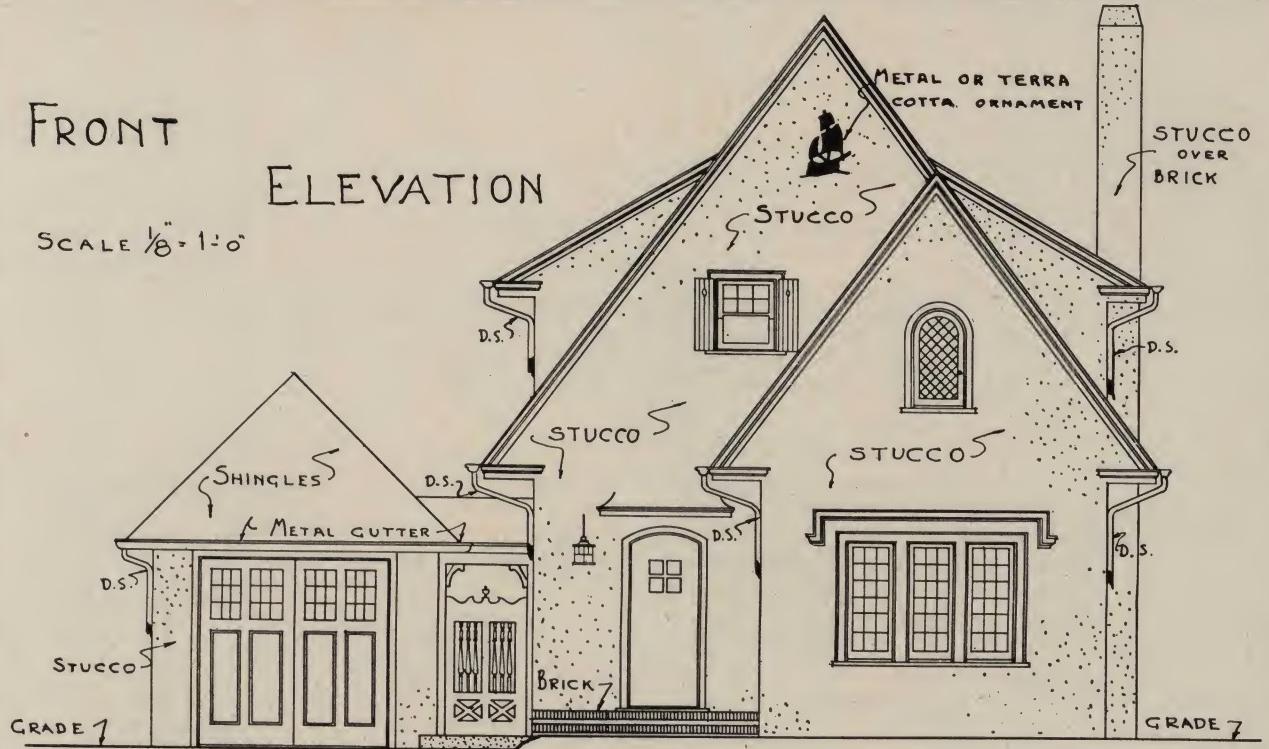
Ceilings and Beams Frequently Receive Special, Decorative Treatment Where Reinforced Concrete Construction Is Used, Often Giving the Beams the Texture and Coloring of Timbers.



## FRONT

## ELEVATION

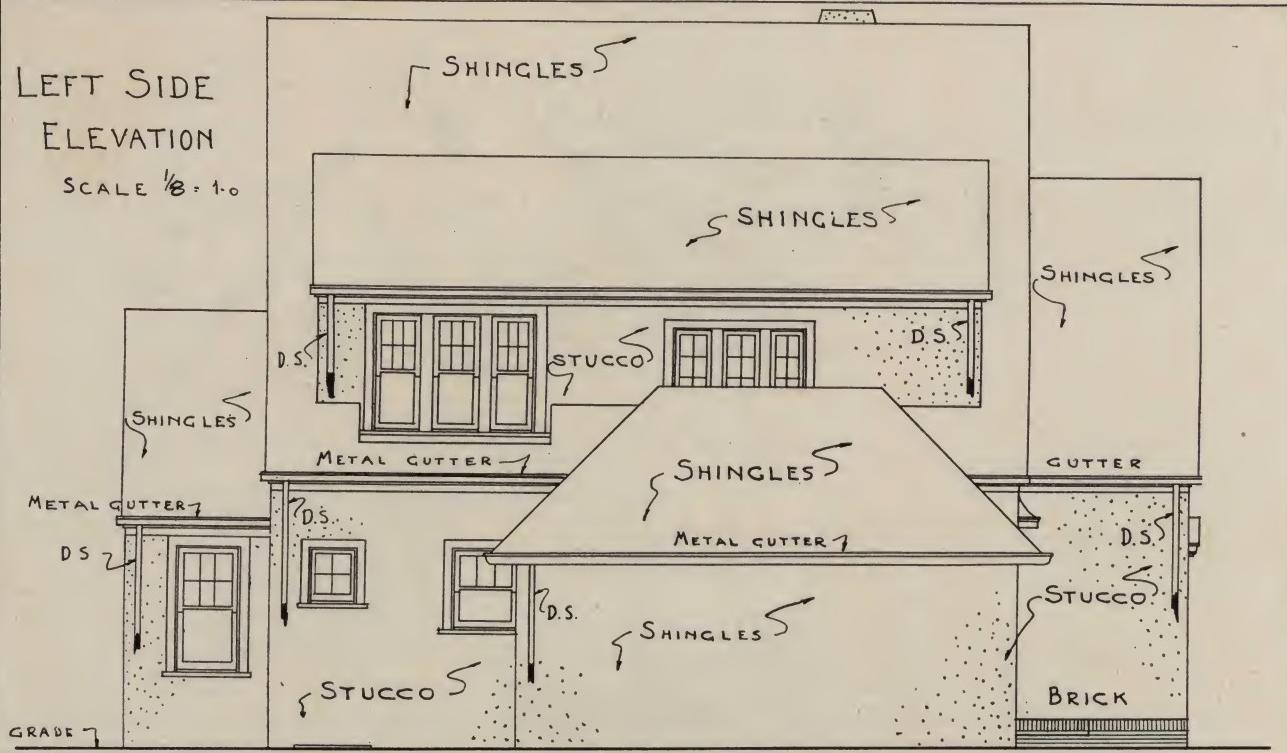
SCALE  $\frac{1}{8}$  = 1'-0"



**THE RIDGELAND:** The First Floor Is Cozy and Convenient with the Garage Placed Where It Is Most Accessible and Blended With the Design of the House. Above is the front elevation while on the next page will be seen the second floor plan, and left elevation.

LEFT SIDE  
ELEVATION

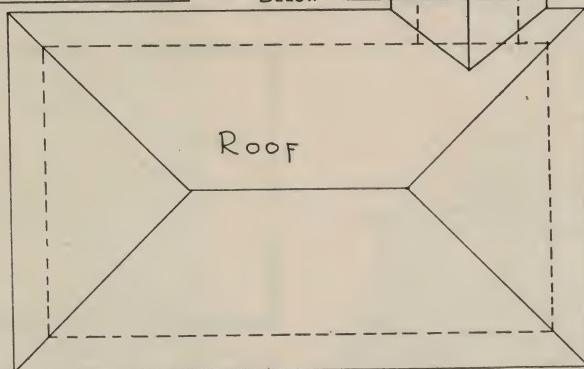
SCALE  $\frac{1}{8}$ -1'-0"



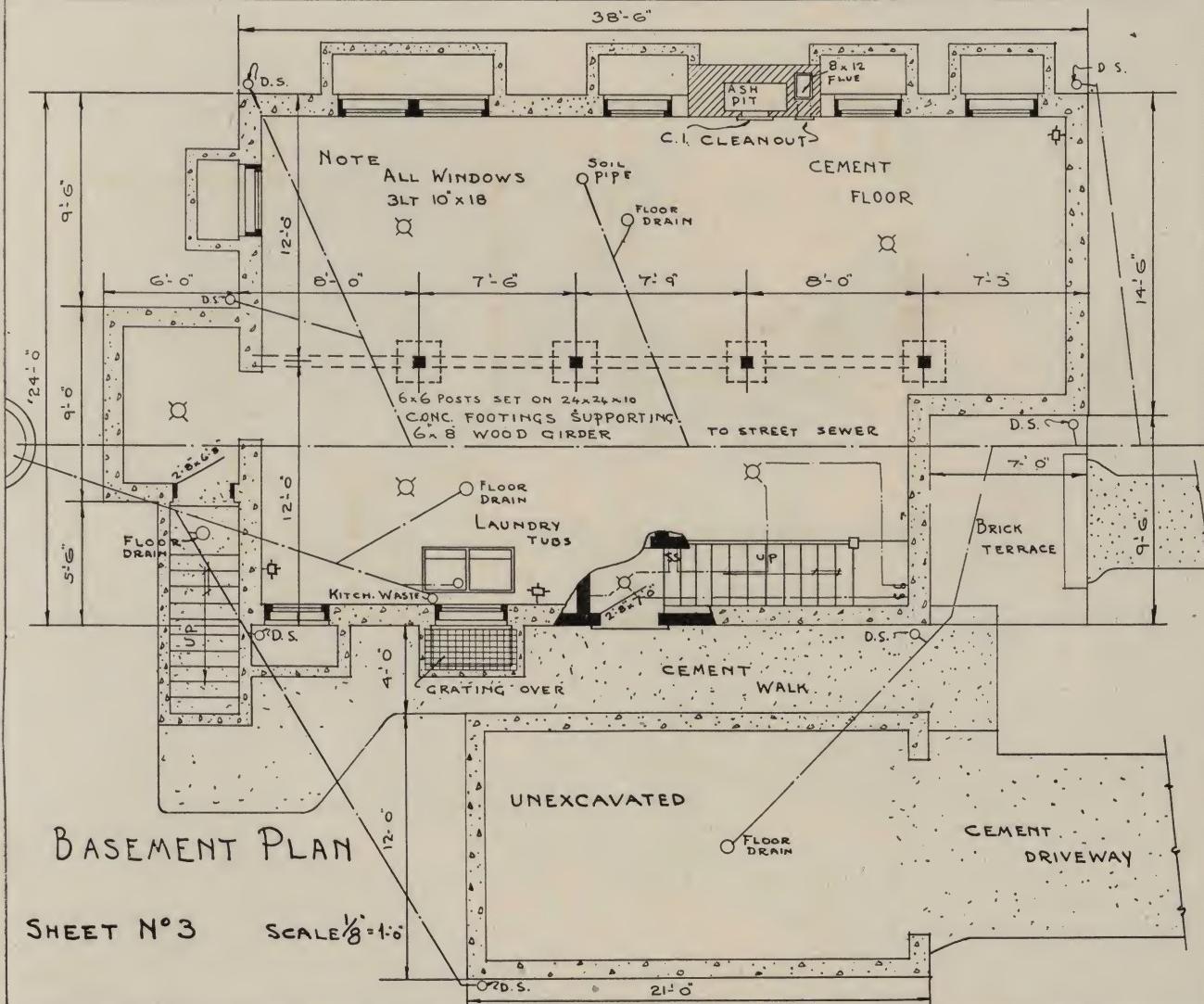
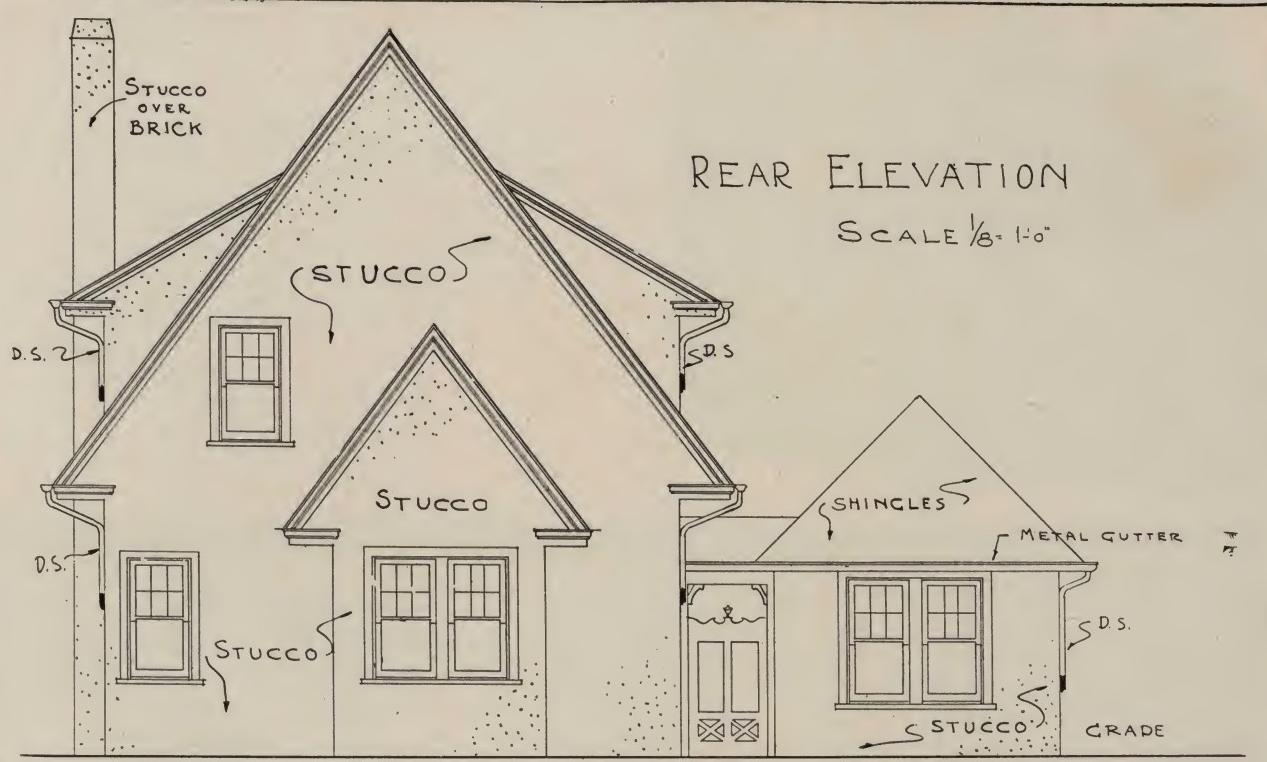
SECOND FLOOR  
PLAN

SHEET N<sup>o</sup>2

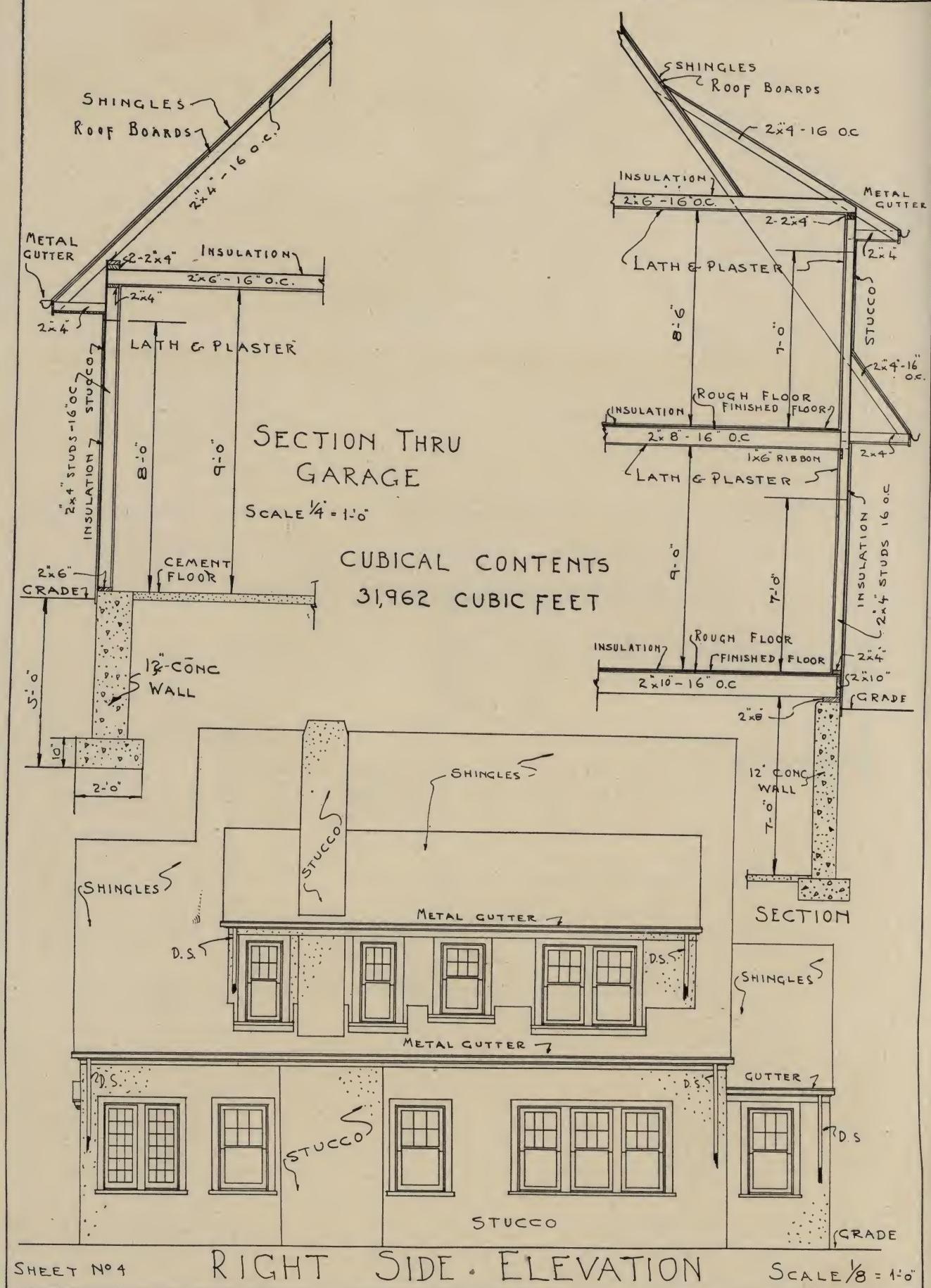
SCALE  $\frac{1}{8}$ -1'-0"



THE RIDGELAND: Comfort Is Evident in Every Feature of the Second Floor With Its Many Large Closets, Two Baths and a Dressing Alcove Off of the Front Bed Room. Turning to the next two pages other elevations and sectional drawings will be found.



THE RIDGELAND: The Entire Space Under This Home Is Excavated to Form a Concrete Basement With a Handy Laundry Space at the Foot of the Basement Stairs. The rear elevation shows the placing of the breakfast nook which is a feature of the first floor.



# The RIDGELAND

A STUCCO Design Full of Character. For Complete Building Plans—Working Drawings to Scale See Pages 89, 90, 91 and 92.





## *The ALVERDA*

THE Latest Idea in Home Designs.  
For Complete Building Plans—  
Working Drawings to Scale See  
Pages 96, 97, 98 and 99.



# The Alverda

The French Cottage Affords an Excellent Model for the Development of a Charming Home Design

(For perspective in full colors see page 94.)

THE present trend of popularity is toward the French style of architecture, adapted to modern American requirements, and here, in "The Alverda," is presented an excellent example of what this adaptation can produce when handled by a skilled designer. The exterior is wholly in the spirit of the French style for, though the round, tower-like corner is distinctly Norman it is in no manner out of harmony with the strictly French character of the design.

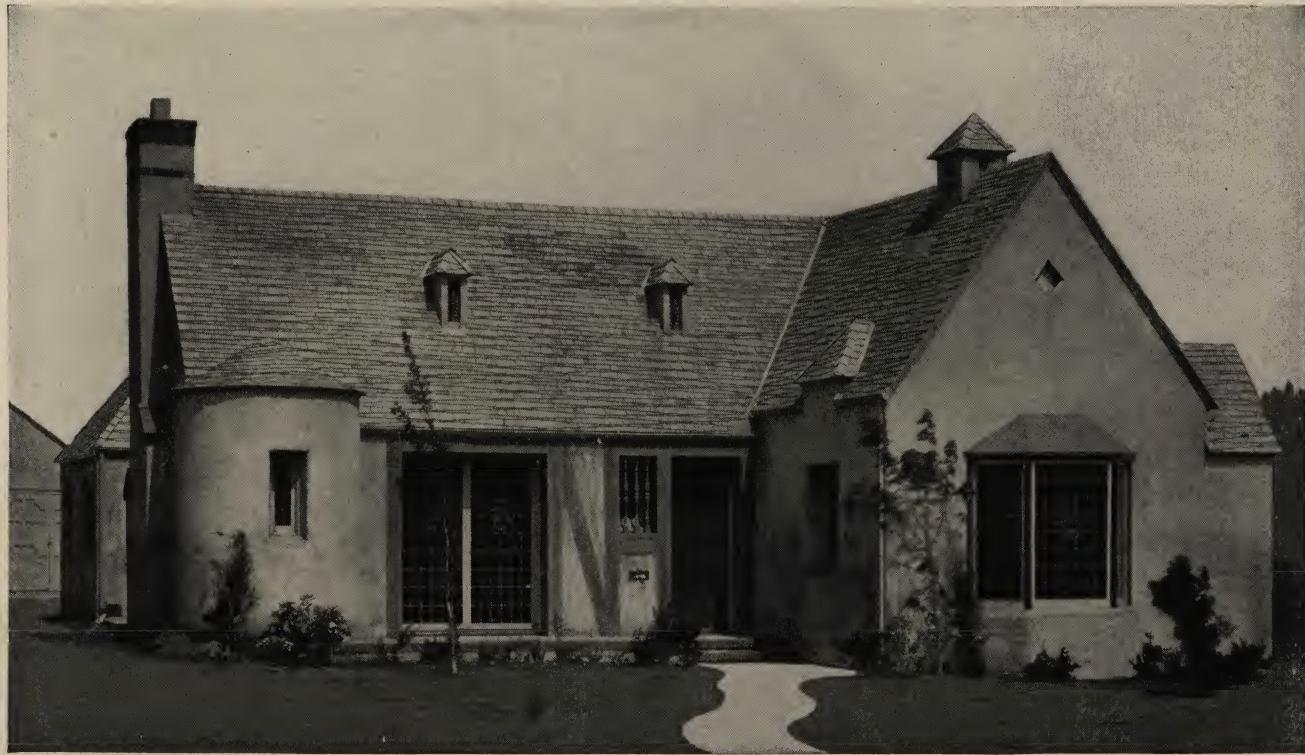
There is something rather refreshing about a home of this sort after the extensive, not to say excessive, use of the Spanish or Mediterranean style which has swept over the country during the past few years. Nor does its sole value lie in this contrast for its fundamental simplicity and graceful lines assure the owner that his home will always possess enduring charm. It will never appear old fashioned for it is truly artistic and the truly artistic is always in fashion.

In spite of its simplicity, this home can never be accused of plainness for there are a number of ornamental touches

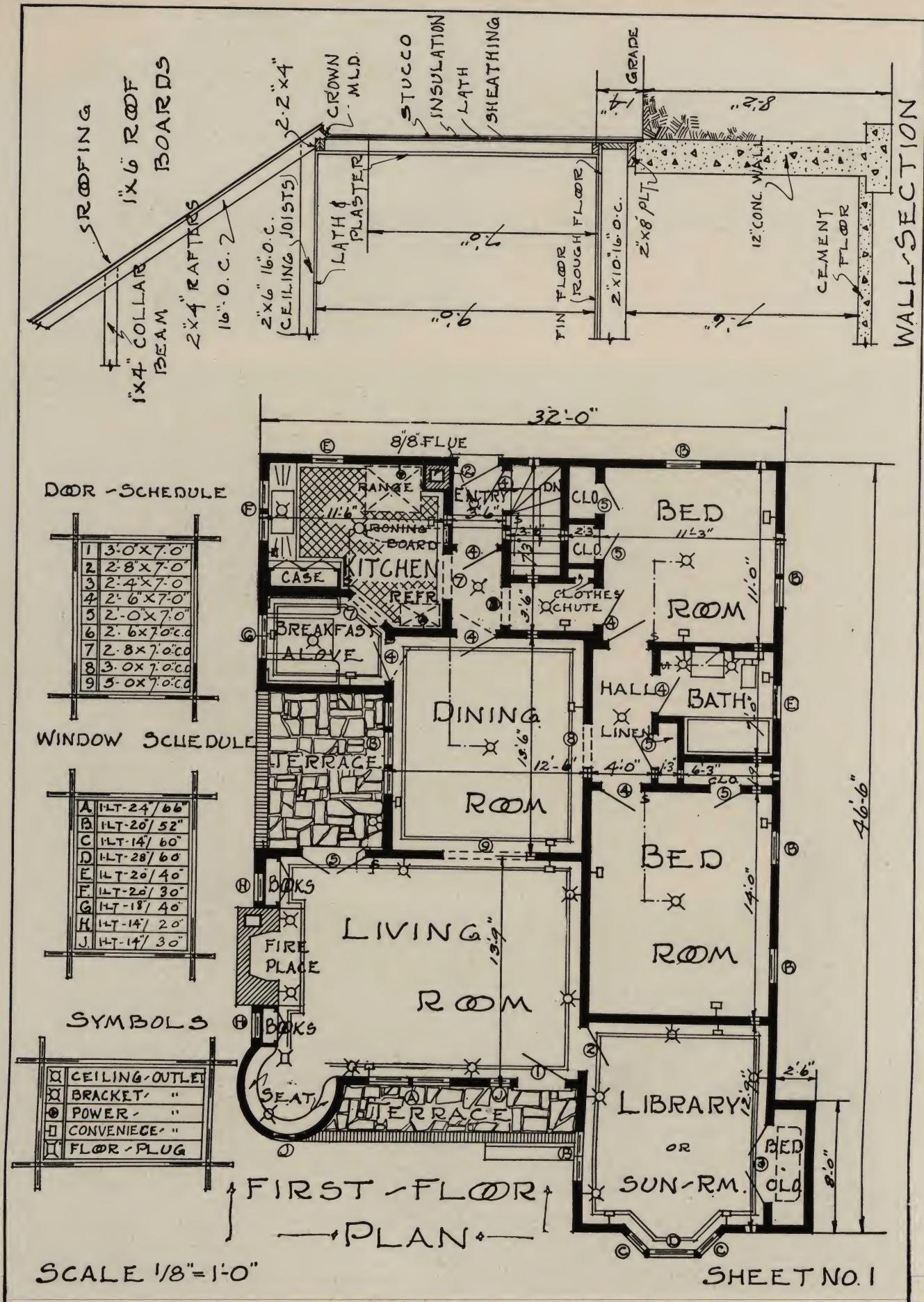
adding much to the charm of its exterior, the deeply recessed casement window in the tower, the long French windows of the living room, small leaded panes, the tiny dormers breaking the roof, the cupola and interesting chimney pot, and the wood grill beside the front entrance.

This entrance as well as that from the flagged terrace at the side, opens directly into the living room where a homelike atmosphere is created by the open fireplace, built-in bookcases and cozy seat set into the towered corner. Opening off this room is another which on the plan is marked "Library or Sun Room" but which, with its bed closet, may be called upon to serve as an auxiliary sleeping room.

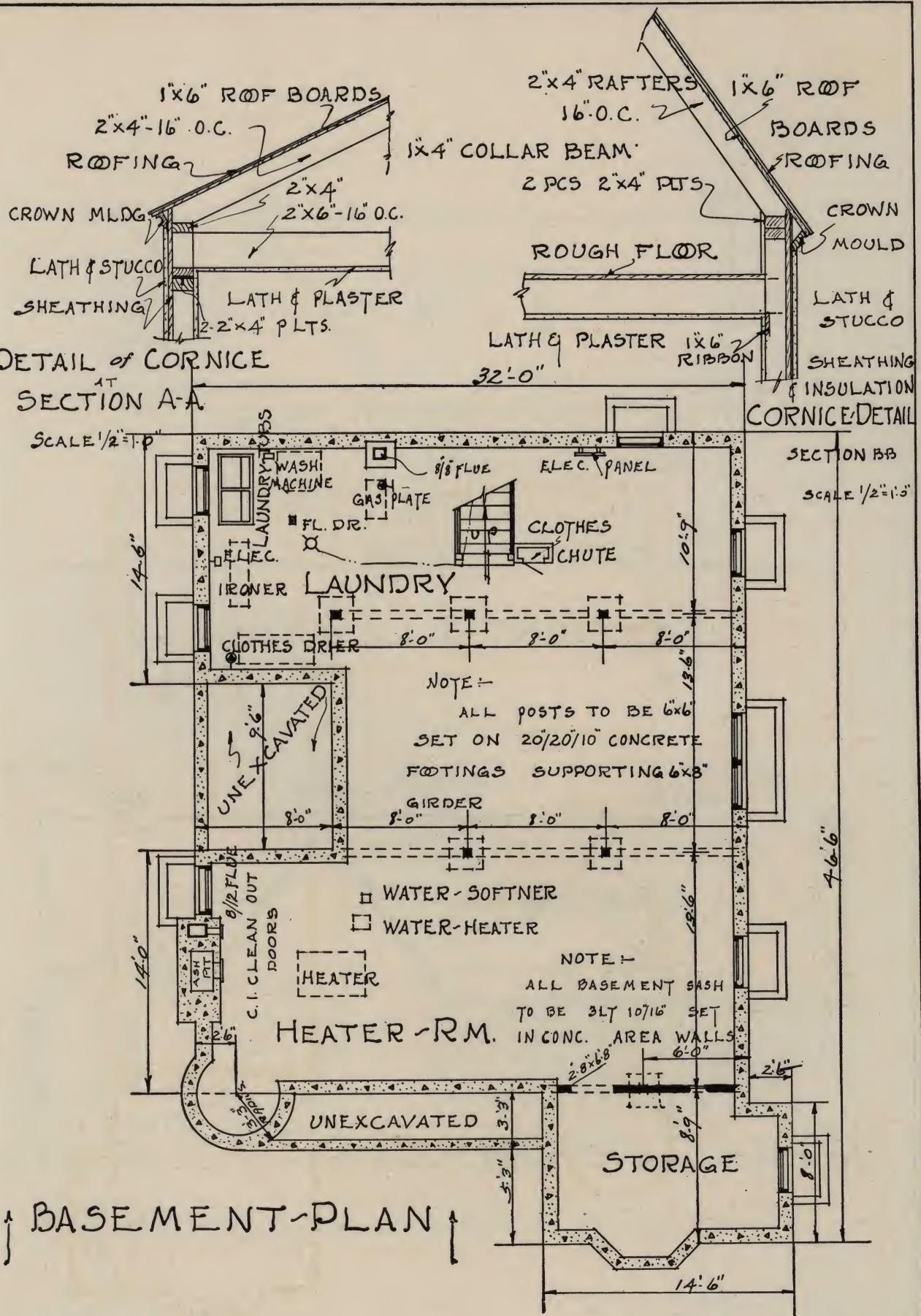
The two regular bed rooms are reached through the dining room and a hall giving access, also, to the bath while beyond the dining room, at the rear, we find a breakfast alcove, kitchen, rear hallway and entrance and the basement stairs. On the whole the plans, illustrated on the pages which follow this, will meet every need of the average family.



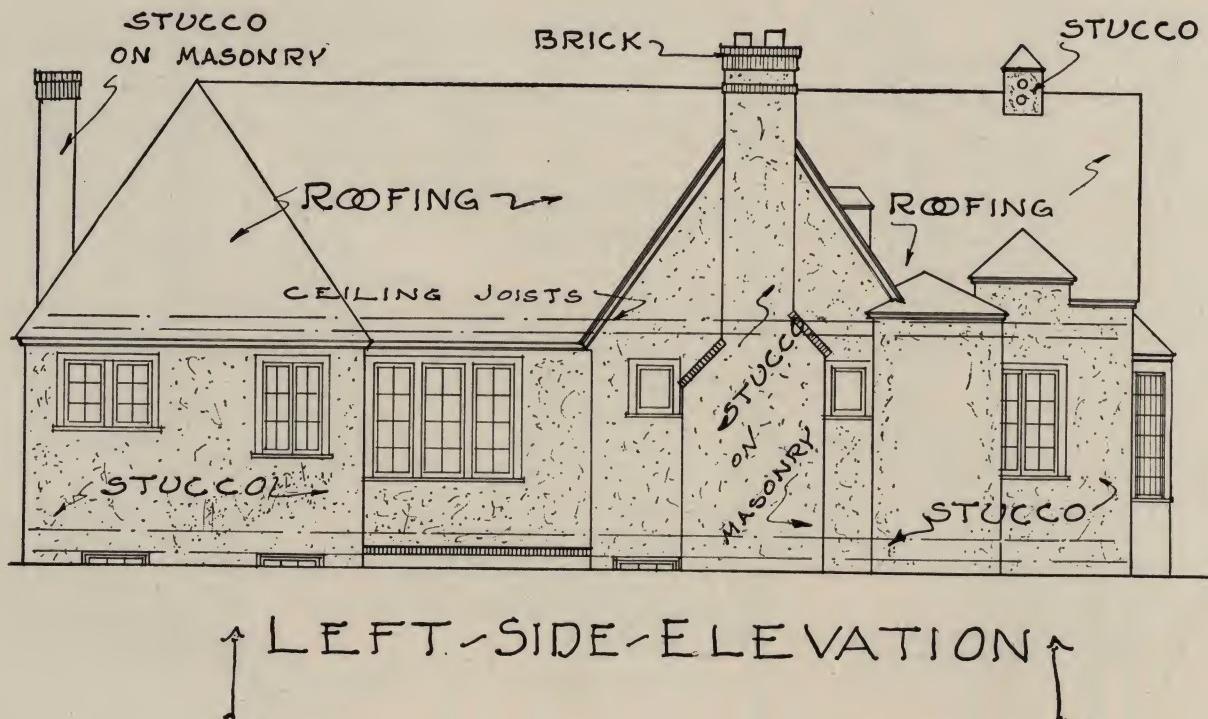
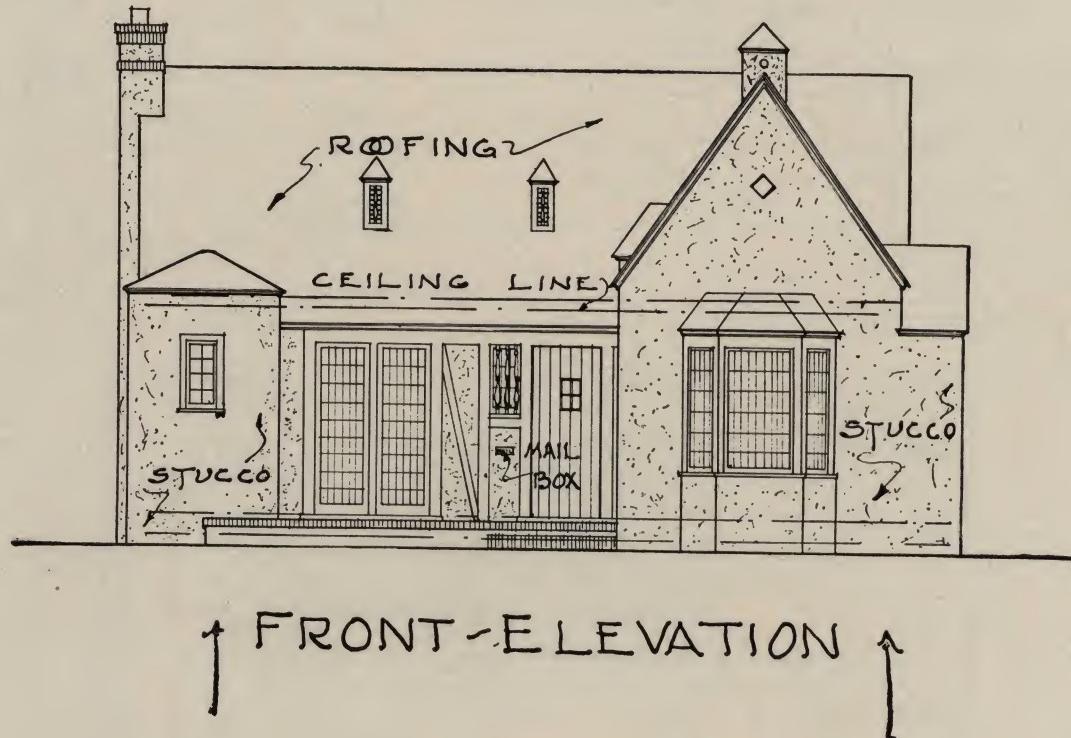
"THE ALVERDA", a design in the French style with a touch of the Norman in the towerlike corner, offers the prospective builder an opportunity to get away from the commonplace and achieve a home both beautiful and distinctive.



**"THE ALVERDA"** Here is offered the main floor plan for this beautiful home together with a sectional view which shows the construction of foundation, walls, floors and roof.

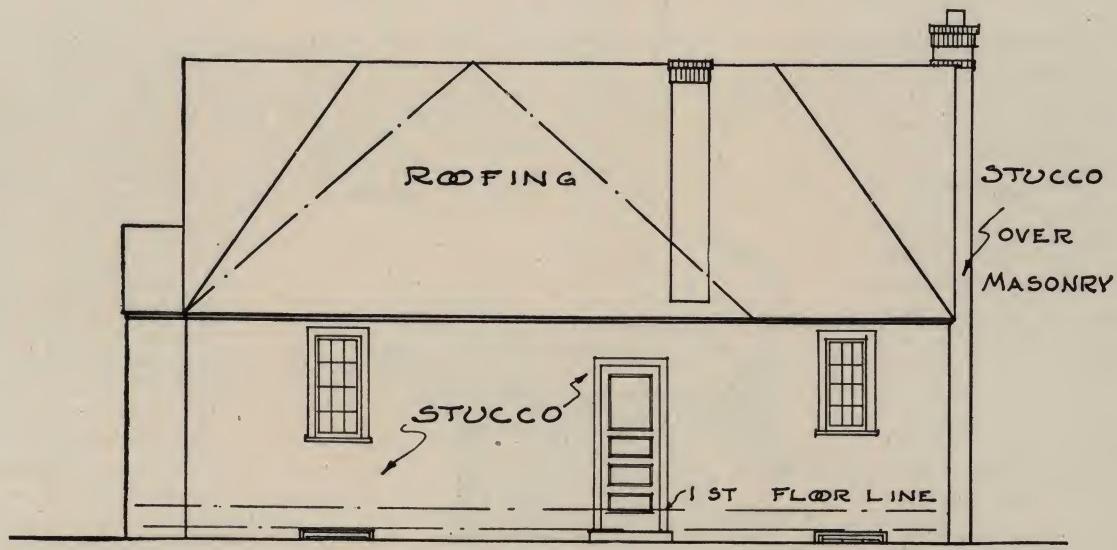


**"THE ALVERDA"** The basement plan and cornice details should prove interesting to anyone planning to build while further information can be had from the following pages.

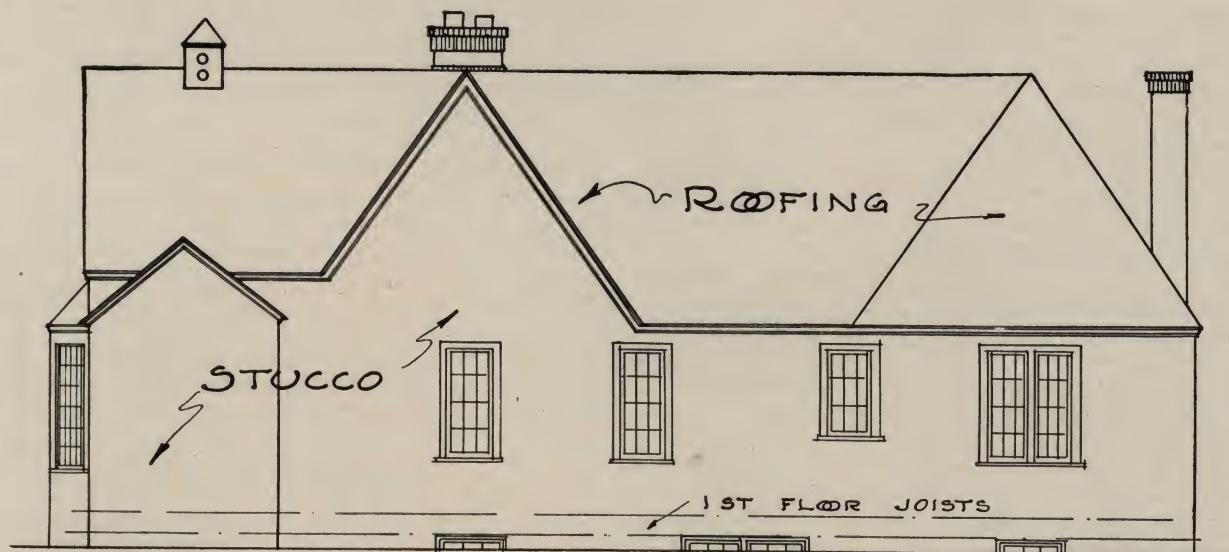
SCALE  $\frac{1}{8}$ " = 1'-0"

SHEET NO. 3

"THE ALVERDA" Front and left side elevations of this Home bring out a number of important structural points as well as giving idea of the form of the house.



REAR - ELEVATION



RIGHT - SIDE - ELEVATION

SCALE  $1/8" = 1'-0"$ 

SHEET No. 4

# Making Furnaces Dustless

## Facts to Invalidate the Assertion That Warm-Air Heaters Must Admit and Circulate Dust, Coal Gas and Smoke to a Building

THE frequently heard criticism that warm-air heaters bring dust into buildings and thus make interior conditions unhealthful will be recognized as unfair to this method of heating when all the evidence has been weighed in the balance. As a point of physical science it is known that all atmosphere is filled to a degree with dust particles. Their number is less in rural sections, on tops of mountains and at the seashore, yet even here an analysis would reveal myriads of tiny dust particles so small that they are invisible to the naked eye.

It is in the large cities that the dust nuisance is most important, however, for here the air we breathe is polluted with smoke, bits of metal and foreign substances of many kinds, whipped up from the earth's surface and circulated by the prevailing winds. Some cities are dirtier than others and, again, dirtier at certain hours of the day.

A practical engineer whose hobby is dust and its separation secured data on the atmospheric dust content of a number of cities of the United States. The information may or may not be refuted later by other practical men, but is probably fairly accurate. He found, for example, that whereas the air of Boston contains about 5,000 dust particles per cubic foot, Atlanta has about 9,000, New York 9,700, Milwaukee 11,500, Chicago 14,300, Pittsburgh 15,100 and St. Louis 17,600. There were, all told, 23 cities under count and the dust content was found to vary between the minimum and maximum figures here reported.

In the average residence a microscopic examination of the air would show about the same dust count as that prevalent in the air surrounding the building. That interiors possess some dust is evidenced when a ray of sunshine or a dust-coated window sill reveals their presence. It is rare that any heating system brings dust into a building more than would come in naturally through building materials, cracks about windows, etc., but the heat arising from radiation or from the registers of a warm-air plant sets the interior air in motion and thus causes it to settle in places other than the floor, where it is more readily noted.

It happens in many instances that heating installers are not careful in the selection of the locations of fresh air inlets, known as cold-air boxes. If these are placed near the ground, as is true when cellar windows are used, and the surroundings are dusty it is not surprising that in fall and late spring, especially, dust will be drawn into the cold-air boxes. Cases, too, are by no means rare where cold-air inlets abut directly on an alley or court where ashes are emptied or there are rubbish piles.

If either is true it would be advisable to construct a plenum chamber, or settling box, somewhat like that shown in Fig. 1. This would best be placed immediately within

the cellar wall opening and should be provided with one or more cloth screens, arranged as slides so that they may be removed, shaken and the cloth renewed at intervals.

As to the cold-air box itself, if made of galvanized sheet steel the joints would best be lock seamed and tight fit assured. It is when boxes are of unmatched lumber that complaints are more often encountered, for unless fitted tightly

cracks will admit a surprising amount of dust and debris of all descriptions. Sometimes outside inlets are referred to as "fresh air" boxes. Recent engineering tendency appears to prefer the recirculation of inside air rather than the use of all outside air. When this is done dust complaints will be less numerous if occurring at all.

It was formerly believed that outside air supply is necessary due to impurity of inside air. This was in the era when little attention was paid to hygiene, modern plumbing and ventilation. Research of the last two years has brought us new and surprising information as to the huge amount of outside air which leaks into a building through cracks about

windows, doors and even through the windows and walls themselves, to refresh interior air.

When windows are not weatherstripped and walls are uninsulated sufficient outside air is drawn in at these points to supply ventilation to some 35 persons at once. With this in mind, recirculation, which saves coal and also provides better heating, may come to be the universal practice. The mechanical circulating fan is assisting the idea greatly.

It is not infrequently that dust from the cellar comes into the warm-air passages of the heater through cracks about the bottom of the casing. To prevent such cracks and provide a tight fitting front the heater must be set on an absolutely level foundation of brick or cement and cement slushed in around the casing ring.

### Cementing Section Joints

How often are we reminded, when it comes to the use of furnace cement, that "haste makes waste." Here is a job that cannot be hurried and the installer who thinks he can furnish an installation quickly so he can obtain his pay, which comes upon completion of the work, and hustles cementing and the firing trial to end his part of the contract, usually lives to rue the day. There is too much poor furnace cement used in joining sections of a cast-iron heater and too little care paid to using sufficient cement to make a tight job. No furnace, nevertheless, will have tight joints long unless the heater has been properly leveled.

Here is one of the chief causes of complaint, so far as transmission of gases, smoke and dust is concerned; for, if

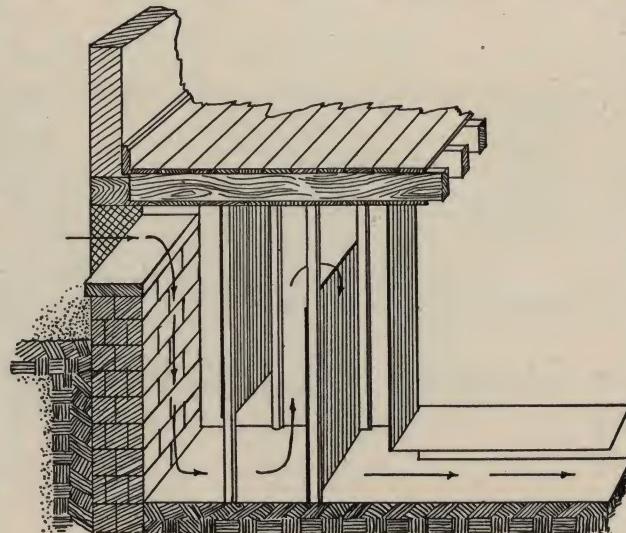


Fig. 1—Fresh Air Room with Baffle Plates which Act as Dust Collectors.

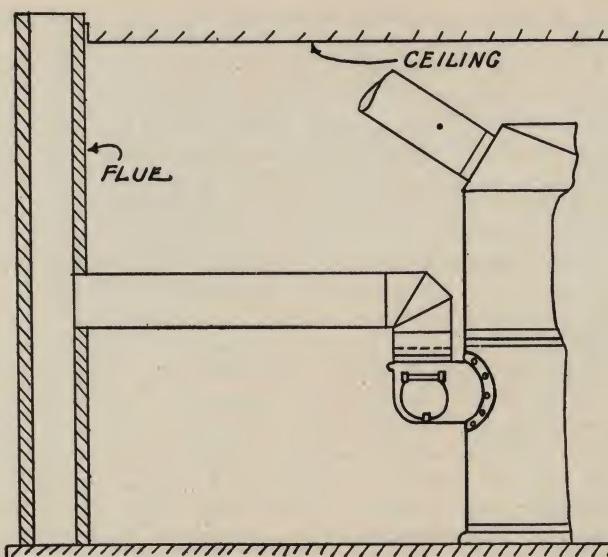


Fig. 2—Horizontal Smoke Pipe Offers Opportunity for the Deposit of Soot and May Interfere with the Draft.

there is a leak between the furnace castings and the free encased area surrounding the heating elements gas and smoke may be mixed with the warm air and thus delivered to the upper parts of the building.

Furnace cement is a heavy, plastic material weighing approximately 15 pounds per gallon. Exposed to the air it dries slowly, remaining pliable after several months. The formation of the initial skin is variable, at times a film forming on the surface within 30 minutes in a dry atmosphere, while in a moist atmosphere this film will not be formed, the cement remaining soft due to the absorption of moisture.

If the moist condition continues a state will be reached where the cement will be softened to a point when it will sag and run, thus pulling away from the casting. The excess moisture absorbed dissolves, leaches out the binder and the solution may flow from the cement. Hence, the cement will be weakened because it has lost some of its binder and, when fired, the cement will have a tendency to powder.

#### Starting Newly Cemented Furnace

Heated slowly to a temperature of 400 to 500 degrees Fahrenheit, the cement bakes to a hard stone-like mass, solid and compact and comparatively free of pores. With increased temperature greater hardness is developed. Asbestos cement, when properly made, will not shrink when burned, but has a tendency to expand and fill the joint and, when precautions are taken that heat is not raised too rapidly, a close-grained cement with minimum of porosity is the result. When quickly heated it swells and blisters, is porous and cracker-like and easily broken.

The method of heating is important for the heat must be raised slowly to expel the moisture contained. If this precaution is not taken the bond between the metal and the cement is broken and the cement will become honeycombed. Instead of porosity of from zero to two per cent in a well cemented joint the porosity may run up to 20 per cent where quick heating has been resorted to. In applying the cement it is essential that the castings be clean as otherwise the cement will not adhere to the metal. Securing with a wire brush is advised and a gasoline saturated rag will remove grease, oil and paint.

A can of cement is sent with every furnace the size of which has been determined as being sufficient for the complete job. In many cases only one-half of the cement is used and, consequently, the joints are not properly filled.

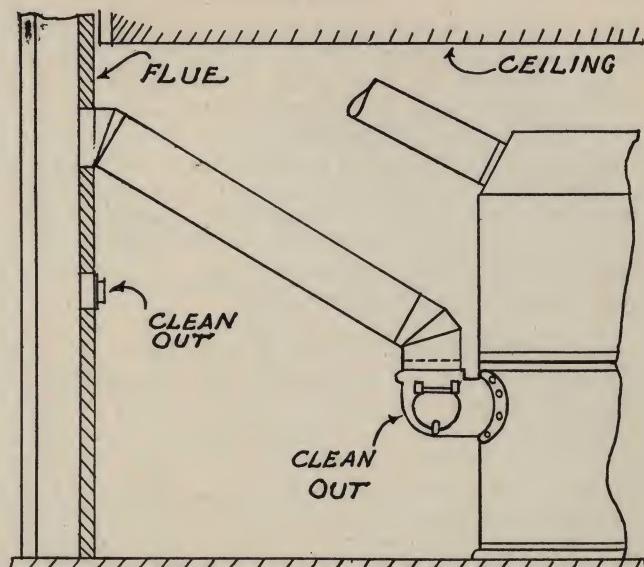


Fig. 3—A Better Method Is a Sloping Smoke Pipe; Better Draft and Freedom From Soot Accumulation Are Thus Provided.

When cement is simply daubed into the cup a strong, substantial joint is impossible. Some installers thin asbestos cement with water to consistency of paint and brush this mixture into the joints, after which the cups are filled with heavy cement. This is found to be an excellent practice and is recommended.

After filling the joint care should be taken to allow the sections to settle of their own weight, avoiding twisting, which pulls the cement from the castings in spots and forms air pockets. The cement which is forced out when castings are put in place should be beveled to a feather edge against the casting. When properly fired, furnace cement  $\frac{1}{8}$  inch thick will support a load of 100 pounds without breaking.

Too little attention is paid to the smoke pipe by the average heating installer. In some cases pipes are permitted to protrude into the chimney flue beyond the inside surface and in others they are merely inserted into the opening without the protection of a collar. Both conditions are bad. When the smoke pipe protrudes into the flue the draft is diminished and a sluggish fire results. When merely inserted into the flue without filling in the surrounding opening there is likely to be escape of gas and smoke into the cellar.

Many times a warm-air furnace is condemned for failure to produce good heating results when the actual trouble is lack of draft. While the heater is, of course, incapable of producing draft, failure to install the smoke pipe correctly often interferes with the draft. Not only must the smoke pipe be connected to the chimney properly, but it is advisable to give it a slight elevation, say, about three feet.

The illustration, Fig. 2, shows a common but erroneous method of making the connection. It will be noted that it is horizontal, although emerging from the furnace below its center. In some makes of heater, that is, wherein the smoke pipe connection is near the top, it is necessary to run the pipe horizontally, yet when its position is below the center a better method of extending it is brought out in Fig. 3.

There is thus afforded an opportunity for a cleanout door in the chimney below the entrance of the elevated smoke pipe and soot and creosote may be scraped out whenever required. This may be done at intervals of three months during the heating season with beneficial results and cleaning should always be done at the close of the season while the carbonaceous material is fairly

loose. Elevation of the piping increases the draft, carries the dust from combustion with it and permits the heavier soot to settle instead of clogging the passageway.

When certain coals and woods are used as fuels difficulty from creosote accumulation is by no means rare. Often the material flows backward down the chimney flue as a thick, gummy liquid, solidifies and causes much difficulty. Some installers recommend burning a little zinc in the fire when creosoting is noted. The chemical action resulting will clear the flue and prevent obstruction by the tarry formations.

#### Cellar Air Supply Not Good

In many localities it is common to take the air supply from the basement. In view of the dirt which is liable to be picked up from this source it will be found more satisfactory to run a connection to the floor of the front hall, an exposed living or dining room, or the foot of a staircase.

The average home owner is prone to resent the suggestion that his basement is dirty and hence unfit to be used as air supply. Yet, the inconvenience of carrying ashes outdoors on all days, coupled with odors of stored vegetables, dust from the coal bin and the miscellaneous nature of the contents of many cellars makes this a

general rule rather than one which must be adhered to strictly.

To assign a common source of dust and explain its going to upper floors is difficult as any looseness in the system may be responsible. Hence, only general suggestions may be made to cover average cases. A few of the most likely spots of failure might be mentioned and include: 1, base rings; 2, front of casing connections; 3, cold-air boot connections; 4, joints between sections of cold air pipe and elbows; 5, casing collar connections; 6, boxing joints of cold-air conductors.

Responsibility for dust leakage in a warm-air heating layout is divided between the manufacturer of the furnace and the installer. Much the same situation exists in the construction of a building, the tightness of which or the reverse depends on the care exercised in putting the sections together. The contractor provides his workmen with materials. If the workmen are careless in cutting and shaping the materials and joining the pieces which make the finished building, loose construction is the natural result.

If the furnace installer is not careful in forming and joining his materials a loose fitting, poor heating job is the logical outcome. Reversely, if a careful installation has been made there should be no cause for complaint.

## Automatic Heaters Yield Even Heat

**Reasons Why Thermostatic Heat Regulators Should Be Installed in Furnace Heating Are Many. Can Building Owners, in Fact, Afford to Be Without Them?**

**A**CCURATE data covering the financial saving possible with thermostatic heat regulators are difficult to muster, as types of warm-air furnaces, steam and hot-water boilers, oil and gas burners, differ greatly in design, size and construction. Every manufacturer of these devices, though, can give specific instances to prove their value. Cases are by no means uncommon where over 30 per cent of the annual fuel bill has been saved and it may be conservatively stated that 20 per cent may be taken as a fair average.

As thermostats are no longer novel, their operation need not be explained here further than to say that the type used in warm-air heating comprises three different pieces, with accessories. One thermostat, usually provided with a clock, is installed on the wall of one of the rooms to be heated and another thermostat is connected to the furnace bonnet, or in the largest leader duct. An electric motor is the third unit.

The operating principle is the same in both

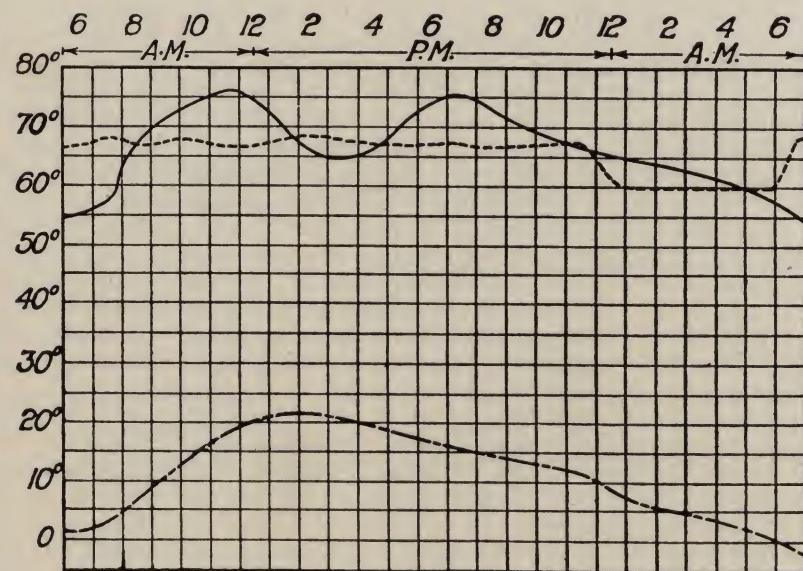


Fig. 1. Temperature Chart Showing the Result of Automatic Control Contrasted with Hand Firing in Domestic Heating. Solid line indicates hand firing temperatures, dotted line automatic control temperatures, lower broken line outside temperature.

thermostats; namely, a bimetallic element, each end being responsive to different temperatures closes and releases an electric circuit to the motor. This then opens or closes the furnace drafts according to the demands for heat. The thermostat located at the furnace limits the temperature of the warm air passing upward from the heater to the rooms and is usually set at about 180 degrees, the temperature recommended as maximum by the National Warm Air Heating and Ventilating Association.

How fuel saving is possible with the automatic thermostat may be observed from the chart, Fig. 1. The solid line shows the typical variation in room temperature with hand firing. The even temperature which accompanies automatic regulation is shown by the dotted line and the normal exterior temperature over a 24-hour period may be noted in the dot and dash line at the bottom. Thus it is seen that in average hand firing the room temperature exceeds 76 degrees twice daily and at 6 o'clock a. m. the building is uncomfortable. By contrast, temperature in a thermostatically controlled residence has nearly reached normal at the rising hour, or slightly earlier, and physical discomfort eliminated at this time.

The clock on the thermostat has caused opening of the front draft and the closing of the check damper without personal attention of any kind. The chart here shown represents conditions of hand firing which are quite conservative. For literally hundreds of thousands of homes interior temperature exceeds 80 degrees many times. High temperatures are injurious to health and as dangerous, or more so, than poor ventilation. Excessive heating dries the throat and nasal passages, making it easier to take cold on going outdoors, dries up office equipment and household furniture. Engineers tell us that warm air is fatiguing and lowers human efficiency to a marked extent.

Some studies along this line made by the experts at the research laboratory of the American Society of Heating and Ventilating Engineers, in collaboration with the U. S. Bureau of Mines and the U. S. Public Health Bureau, in Pittsburgh, are of great

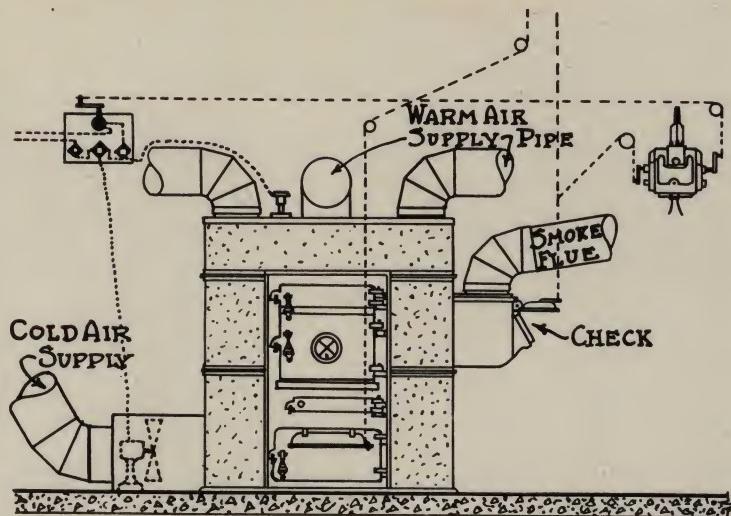


Fig. 3. Another of the Accepted, Dual Control Methods of Thermostatic Regulation of Warm-Air Heating Systems.

per minute the average person can do four times as much work as in saturated air at 98 degrees and six and one-half times as much work as when the air is 110 degrees.

It was found, further, that when the air was still, as it is in the average home and office, the subjects examined complained of fatigue for several hours after leaving the laboratory when the temperature rose above 80 degrees.

#### Shoveling Coal Out the Window

Rather than take the trouble to adjust the drafts when rooms become too warm, most householders open the windows to cool off. This is equivalent to throwing about two of every five shovelsful of coal supplied the heater out the window, needless to say a wasteful way of "tending the furnace." The economical housewives, for it is the women of the house in most instances who have the handling of the furnace during the day, when the male members of the family are at their business, may make something like half a dozen trips to the basement during the day to open or close the drafts, besides the trips necessary to add fuel to the fire.

Special attention has been given to the application of thermostatic regulators in warm-air heating with the result noted in Fig. 2 and Fig. 3 showing the dual control as it functions in use. Attention is called to the use of the electric furnace fans, now coming into common use. In the drawing, Fig. 2, it is understood that the furnace fan gets its air supply from a duct, not shown, and not from the basement, as this practice is no longer recommended in view of the probability of the basement air being impure. When the furnace fan is used it is started simultaneously with the opening of the ashpit door and closing of the check draft.

It likewise is observed that the limiting thermostats are shown in two locations, one at the side of the bonnet and the other in the largest warm-air leader. Some engineers advise placing the limiting thermostat far enough away from the body of the furnace as not to be affected by the radiant heat, hence recommend placing it in the warm-air pipe. In either case the instrument includes a special flange to provide a tight joint where the thermostatic finger protrudes within the pipe or bonnet and into the path of air flow.

Overheating of furnaces due to excessive firing, insufficient air supply, lack of inner casing and structural shortcomings is known to be responsible for the deterioration

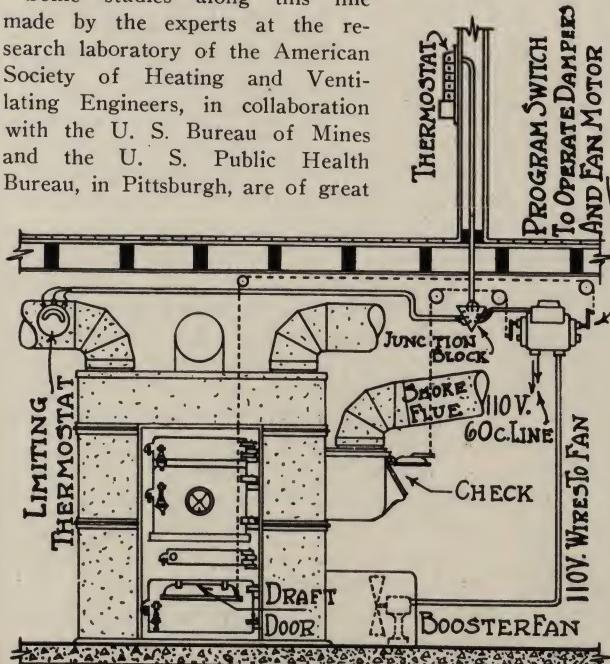


Fig. 2. One of Two Accepted Methods of Applying Thermostatic Regulators in Warm-Air Heating Systems, Showing the Dual Control.

interest. It was shown here, for example, from observations of human subjects that with air at 71 degrees and 55 per cent relative humidity and air motion of 350 linear feet

and short life of many fine plants. It is, in fact, one of the serious problems confronting the furnace industry today. By preventing excessive bonnet temperature overheating is impossible, the cellar is kept comfortable and the life of the furnace prolonged.

The author recalls one installation in particular where overheating proved expensive. The building was a residence with an herbarium at the rear. At the time the heating work was estimated it was apparent that the herbarium was not in use, the large windows on that side of the house having been closed in with matched boards. About a year after the installation of the furnace the owner decided to use the herbarium again and removed the boards over the windows. Though the glass exposure was on the south side it was found on cold, wintry days that the extra glass surface made that side of the building difficult to warm.

The owner immediately began to force his furnace and partially closed the slides, or vanes, of the registers in certain rooms. These rooms became overheated and register temperatures often reached 220 degrees. The furnace became a veritable coal hog. At the end of the heating season under this arrangement some sections of the furnace had sprung apart and the grate was twisted and broken as if some one had struck it with a sledge hammer. Considerable expense accompanied repairing the heater and the owner accused the contractor of having installed too small a plant.

Though not true in the foregoing circumstances, installation of too small a plant is a common mistake of owner and installer alike. The latter fears losing the contract on account of high price and the owner often refuses to pay enough to include the installation of a first class job. Many times the installer would be far better off in the end to permit some other contractor to take a job of this kind. Often, too, a matter of \$40 or \$50 spent at the outset to obtain an adequately sized plant is the deciding factor in getting satisfactory heating or the reverse.

Too small a plant is poor economy under any conditions. What happened to the owner mentioned and his furnace under forced conditions should be a danger signal to all who like to "whoop up" the furnace at times and permit it to almost go out at others. The prime object sought should be even heating, and this can best be accomplished through the use of automatic thermostatic regulators.

In addition to the wide publicity of manufacturers, the greatly increased popularity of thermostats in the last few years has come about in part from the extended use of oil burners. Practically all makes of oil burner now incorporate automatic, thermostatic regulation as a fundamental part of their apparatus. In fact, this is almost a necessity here, for otherwise home owners would have to turn off the fuel supply every time the room temperature is exceeded and open the line again when more heat is desired. This would be a hopeless task and involve more trips to the basement than owners have to make now with coal heaters when operated by hand.

#### Large Air Volumes, Moderate Temperature Desired

An important consideration in warm-air heating is the introduction of a large volume of air at moderate temperature, say from 145 to 180 degrees, rather than a small quantity of extremely warm air, say from 180 to 225 degrees. It was the use of small volumes of high temperature air which caused the furnace to be known as a "hot air" system. This term should now be discouraged as high temperatures, small volumes and small pipes have given way to large volumes of air, larger ducts and registers, larger

heaters and inner casing placed within an inch or so of the outside casing. These are usually of tin or galvanized iron and merely provide a stream of cool air as insulation for the exterior of the plant.

To illustrate just how important this item of air temperature at the registers really is numerous tests on the subject have been made at the Engineering Experiment Station of the University of Illinois. During a low temperature test each square inch of leader duct to the first floor registers was found to supply 50 B.t.u. (heat units) per hour, each square inch of stack to second floor registers 89 B.t.u. per hour and each square inch of stack to third floor registers supplied 122 B.t.u. The draft was 0.05 inch, water gauge, and the rate of combustion was 3.8 pounds of coal per square foot of grate.

By merely increasing the draft to 0.14 inch, w.g., the combustion rate rose to 5.6 pounds of coal per square foot of grate and the average air temperature at the registers became 175.8 degrees. This raised the useful heat carrying capacity of each square inch of leader pipe for the first floor registers from 50 to 103 B.t.u. per hour, for the second floor from 89 to 153 B.t.u. and for the first floor from 122 to 204 B.t.u.

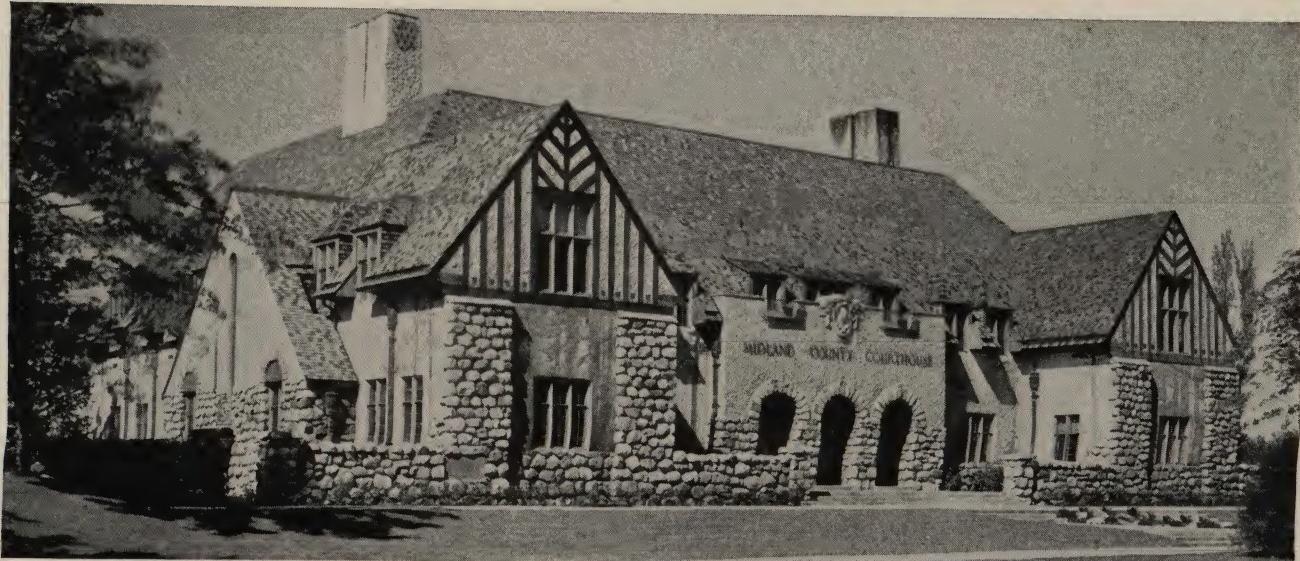
A further increase of the draft to 0.16 inch, w.g., gave a still higher combustion rate of 6.5 pounds per square foot of grate and correspondingly greater heat carrying capacities for each square inch of leader pipe. Hence, it is seen that an increase in register temperature not only adds more heat to every pound of air supplied at the registers but also increases the number of pounds of hotter air which is supplied.

By merely increasing the draft and combustion rate the register temperature was raised from 141.2 to 197.5 degrees and the heating capacity was increased from 58,500 to 130,000 B.t.u. per hour, or an increase of 122 per cent. The outstanding fact in connection with the rise in heating capacity is that the free area through the furnace and leader pipe remained the same. In rating a furnace, therefore, on the basis of the number of square inches of leader pipe which it will supply, when one furnace is to be compared with another as to capacity, the air temperature at the register should be stated at the same time.

The test figures just cited illustrate what happens when the average person operates a warm-air plant by opening and closing dampers. When there is no fan, opening the ashpit door causes the drawing in of a greater supply of air due to chimney draft. The increased air supply, mixing with the coal gas, results in more rapid combustion, burning of a greater quantity of fuel, raising the temperature of the air to be delivered to the upper part of the building and often overheating the furnace in the process. As the combustion rate increases the efficiency of the heater falls off, in most cases, and the fuel provides less of its potential heat for warming purposes.

No evidence of the modern trend towards convenience and economy in heating is more convincing than that of the automatic thermostatic heat regulator. This little instrument, almost worth its weight in gold, is daily finding its place in our homes, offices and public buildings and will probably continue to do so until every building having a central heating system is equipped with one.

The even temperature provided by the automatic control relieves the succession of over and under heating, makes raising of windows needless, saves innumerable steps to the basement to regulate draft dampers and permits maximum efficiency to be obtained from the furnace. The cost of installing a thermostat is not great and these devices should pay for themselves in two seasons in fuel saving and added convenience.



**A Courthouse in Tudor Style Is Sufficiently Distinctive to Be Worthy of Note but the Native Origin of the Building Materials and the Unique Treatment of the Exterior Walls Add Greatly to the Interest.**

## A New Decorative Material Used

**Plastic Mosaics, in Brilliant, Non-Fading Colors, Picture the Early History of the Region, on the Exterior Walls of the Midland County Courthouse**

THE county courthouse at Midland, Michigan, is notable in a number of ways. First of all it is a most attractive building, as may readily be seen from the photograph reproduced at the top of this page. Its handsome Tudor architecture is a pleasing and distinctive departure from the conventional type of public building, developed by Bloodgood Tuttle, architect, of Cleveland, Ohio. Then, too, the lower half is masonry of native boulders collected from the hundreds of farms of Midland County. Likewise the stucco of the upper portion is a product of native origin and it is in connection with this stucco that the most notable distinction is found.

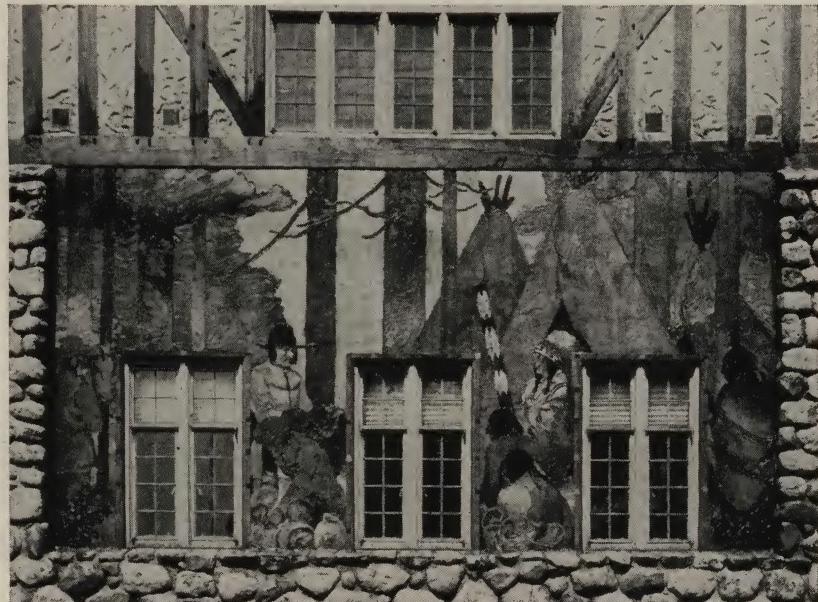
These walls are decorated with colored mosaics which picture the early history of the region, starting with the days of the Indians, following the trail of the trapper and trader and finally showing the lumbering days with lumber jacks in brightly colored mackinaws, and all against a background of the green pines of Michigan, the vast natural resource on which the prosperity of the state was founded.

These mosaics are the work of Paul Honore, the Detroit artist. They are known as plastic mosaics and are done in a material which possesses all the brilliance and working ease of marble and oil and the weather resisting qualities of granite. It opens a vast field for exterior decoration besides possessing a unique beauty and utility for interior paneling and relief work.

The basic material is a chloride and magnesia cement into which pigments of finely ground, colored glass are worked. The artist applies this material with a small trowel, like a putty knife, anywhere from  $\frac{1}{8}$  inch to  $\frac{1}{4}$  inch thick. The mixture sets in about four hours. When dry,

both its appearance and texture are similar to the surface of a grindstone. It possesses a remarkable resistance to wear, breakage and fading of colors and gives full detail of color and line in any angle of light.

A panel of this mosaic, when dropped upon the floor, loses not a particle by chipping or sloughing, and bending or bulging the board fails to loosen it. The fact that it will never fade from exposure to sunlight or the other elements is due to the use of ground glass pigments. The color is enclosed within the glass and glass does not admit the ultra-violet rays of the sunlight which are responsible for bleaching.



**Against a Background of Pine Forest, the Early Periods of the Region Are Pictured in Brilliant Color by an Artist Working in Plastic Mosaic.**

# The Amburg

This American Adaptation of the French Peasant Style Makes a Highly Distinctive Home with an Air of Quaintness

(For perspective in full colors see page 111.)

MORE and more the designers of our modern American homes are going to the older recognized architectural styles for their inspiration and adapting them in plan and equipment to the demands of the present day home builder. On every hand we see Spanish, English, Italian, Dutch Colonial and New England Colonial homes. Less frequently we see a home designed after some other of the recognized European styles and because of this fact such a home stands out with a distinctive individuality in its neighborhood.

Such a house is pictured below and in full color on page 111. Its design has been inspired by the houses of the French peasants and the quaintness which is characteristic of these simple dwellings has been ably retained while the plan has been adapted to the needs of the American family and provided with all the accessories and conveniences which are now considered necessary.

Simplicity is the keynote of the exterior, the only ornamentation being found in the treatment of

windows and entrance, the chimney pots, the irregular shingles covering the roof and the rough textured walls.

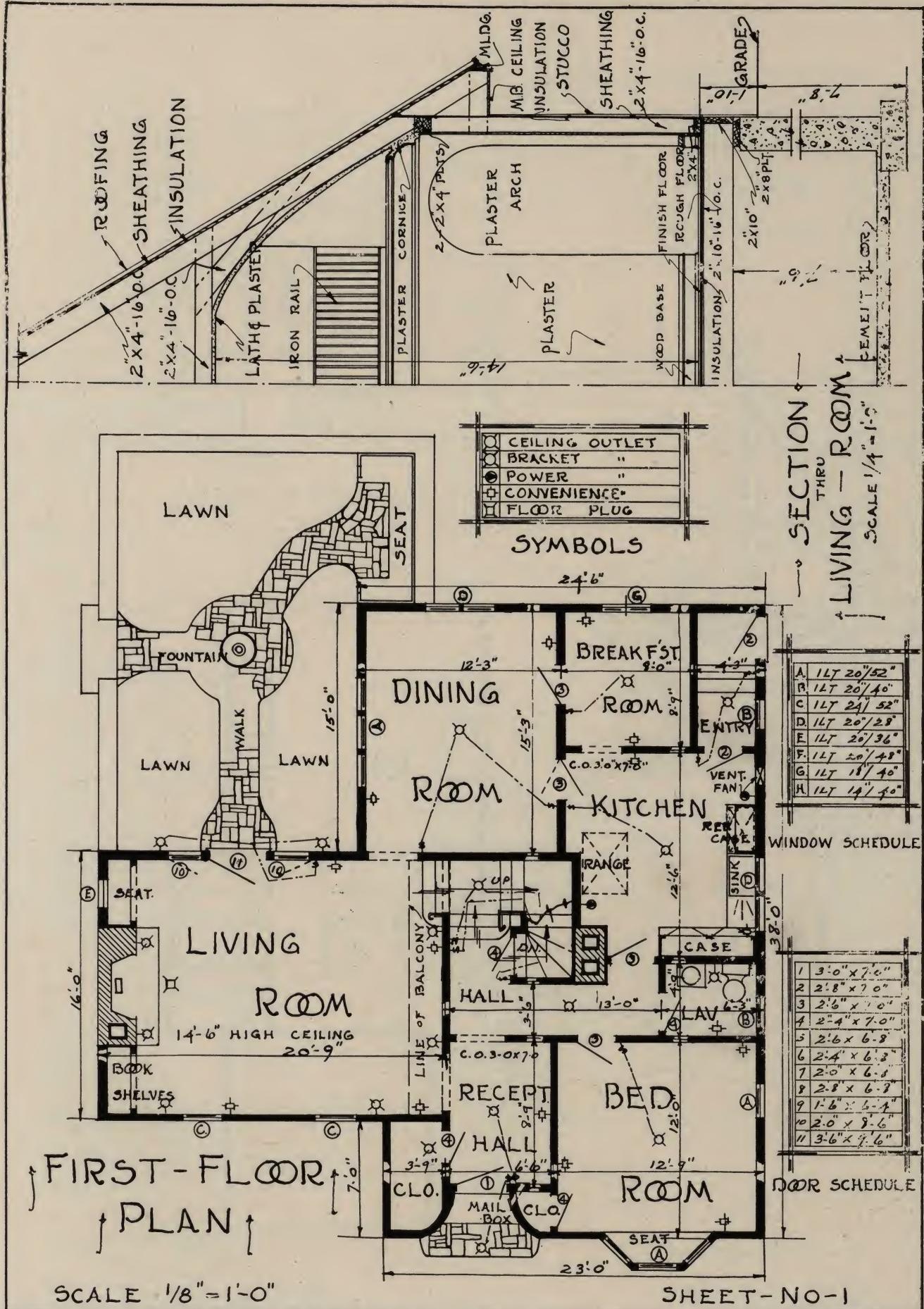
Conspicuous in the interior arrangement is the high ceiled living room, the arched ceiling extending to a height of 14½ feet. At one end of this spacious room is a great fireplace while opposite it is a charming balcony opening from the hall on the upper floor.

Other rooms on this floor are a dining room, kitchen with adjoining breakfast room, a bed room and lavatory. The entrance admits one to a reception hall which also contains the stairway leading to the upper floor. On this floor there are two bed rooms and a complete bath room.

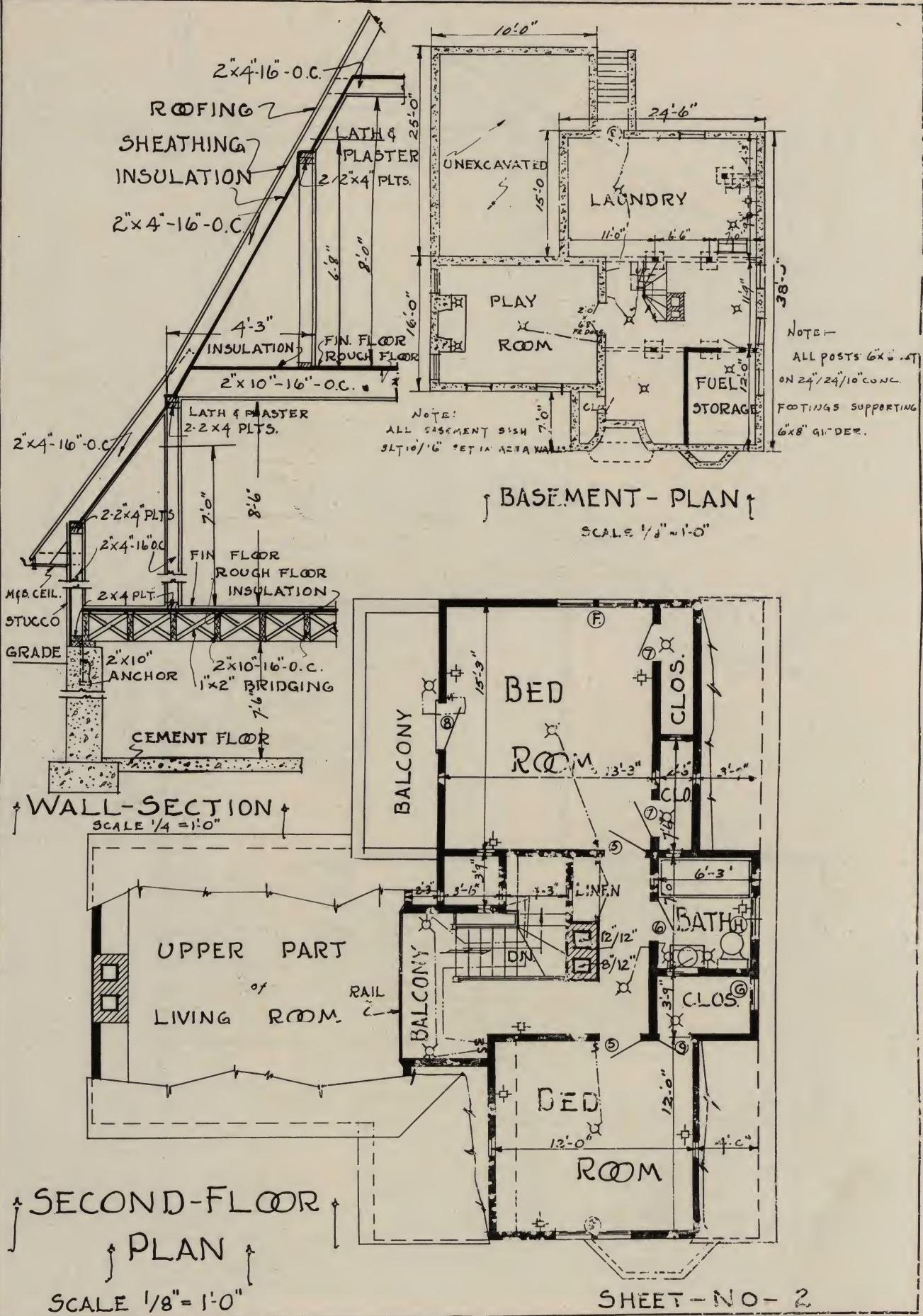
The arrangement of these rooms is one of marked convenience. Just how it has been handled can be seen by referring to the pages which follow this. Here are shown not only the floor plans, but also details which carry the whole story of this home.



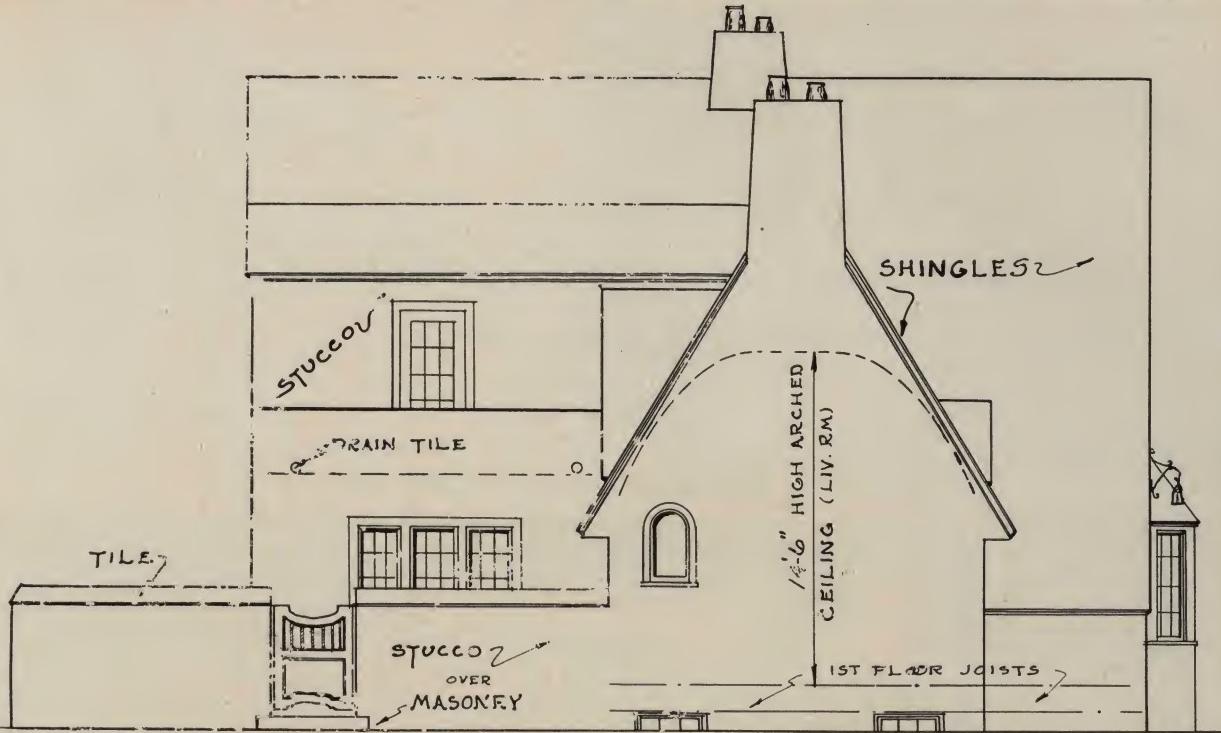
**THE AMBURG:** An Air of Quaintness Pervades This Charming House Which Has Drawn Its Inspiration from the Peasant Houses of Sunny France and Has Preserved the French Characteristics While Incorporating the Modern Improvements Which Are Demanded by the Present Day American Home Owner.



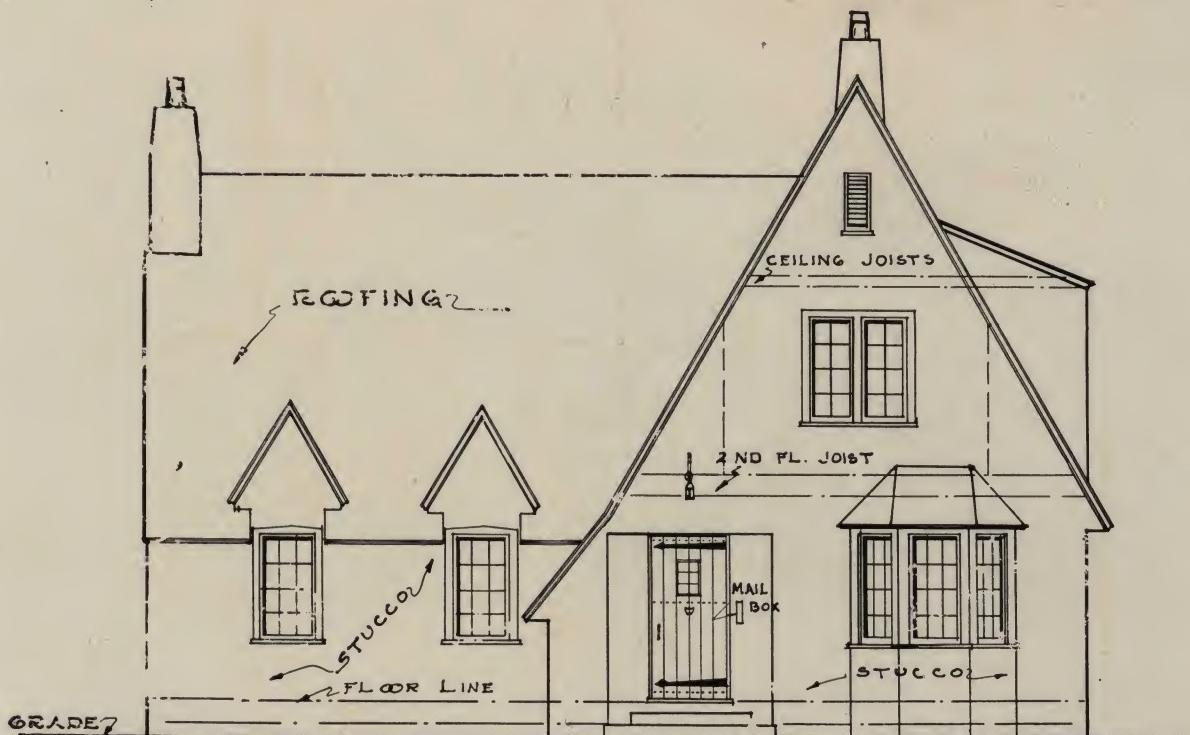
THE AMBURG: The First Floor Plan Shows Us How the High Ceiled Living Room with Its Balcony Occupies One Whole Wing. Above is a sectional sketch showing wall and roof construction.



**THE AMBURG:** On the Second Floor of This House There Are Two Bed Rooms in Addition to the One Below Stairs and Also a Complete Bath Room. Details of construction and basement plan, above, are supplemented by elevations on the pages which follow.



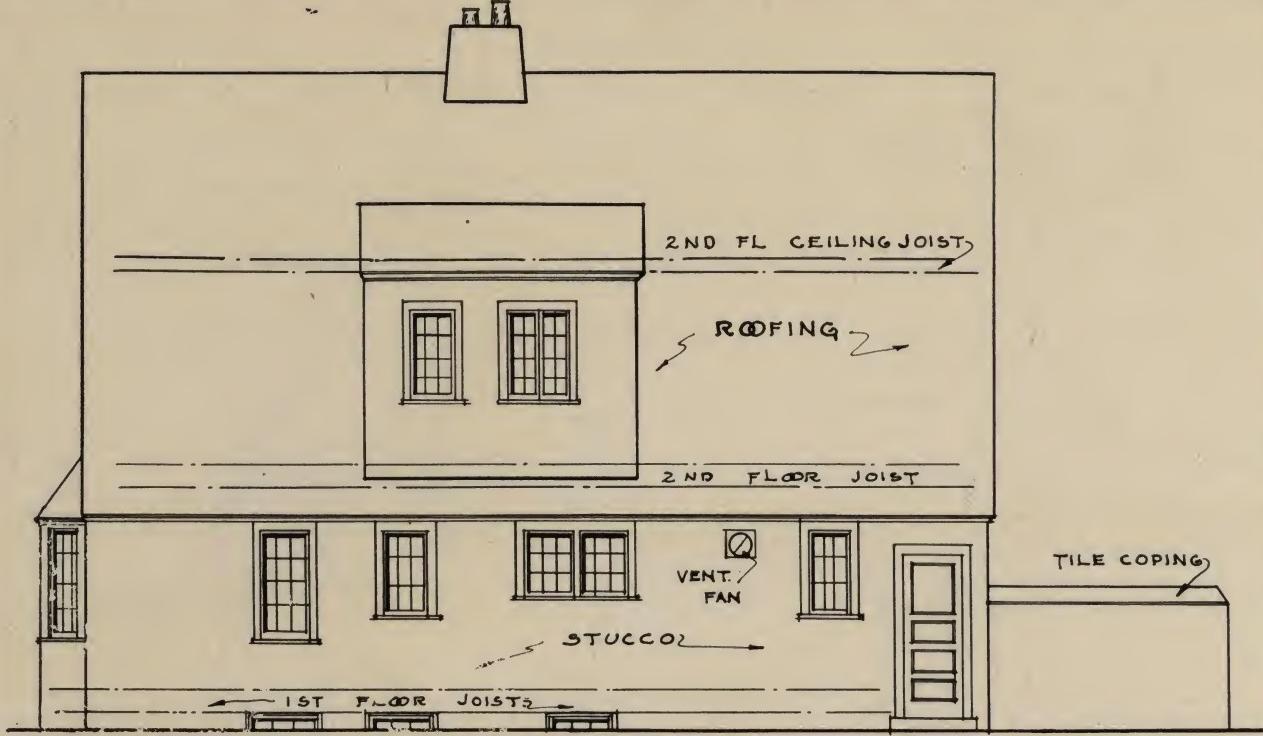
LEFT-SIDE-ELEVATION



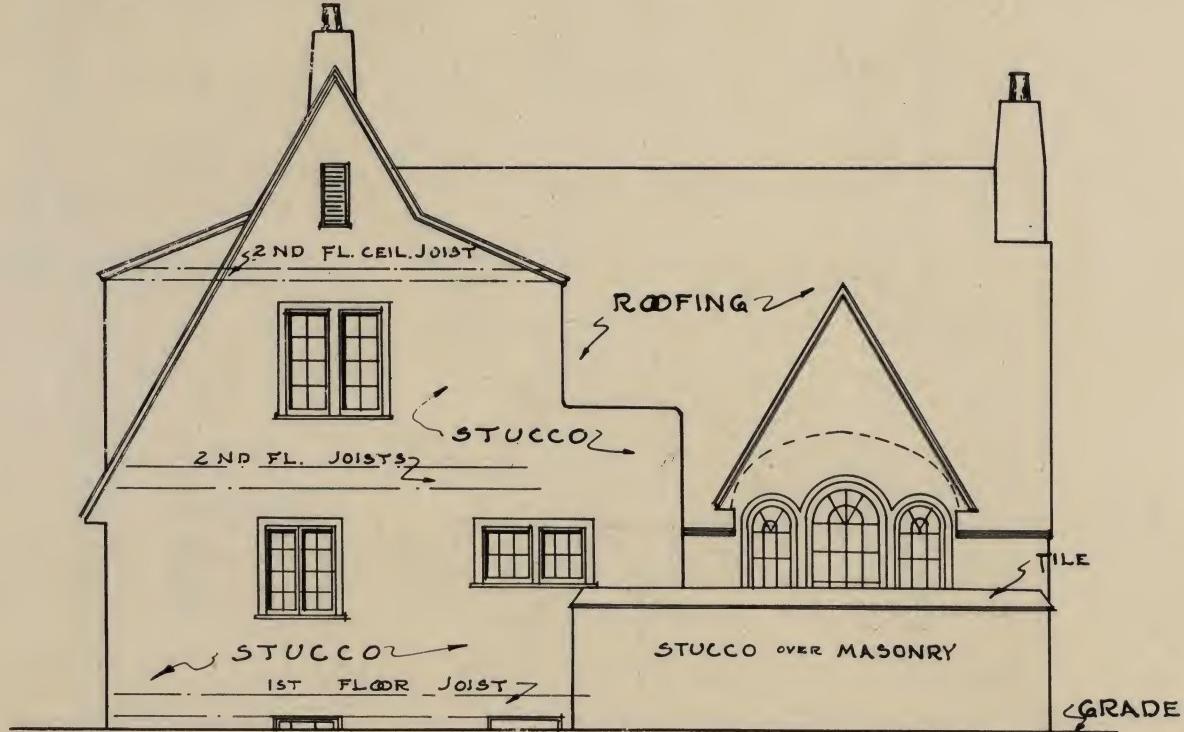
FRONT-ELEVATION

SCALE 1/8" = 1'-0"

SHEET NO - 3.



↑ RIGHT - SIDE - ELEVATION ↑



↑ REAR - ELEVATION ↑

SCALE  $\frac{1}{8}'' = 10''$

SHEET - NO - 4.

THE AMBURG: And Here Are the Rear and Right Side Elevations Which Complete the Elevation Views and Furnish the Remainder of Working Drawings for This Charming House.

## *The AMBURG*

A FRENCH Cottage Design in Stucco. For Complete Building Plans—Working Drawings to Scale See Pages 107, 108, 109 and 110.





## *The ANACONDA*

A CHARMING Brick and Half Timber Home. For Complete Building Plans—Working Drawings to Scale See Pages 114, 115, 116 and 117.



# The Anaconda

A Brick House in English Style Set Off with Patterned Brickwork, Stucco, and Rough Hewn Timbers in Effective Combination

(For perspective in full colors see page 112.)

**A** NUMBER of very interesting and attractive features are to be seen in the adaptation of English architecture used in this Home. Conspicuous among these are the rough hewn timbers, so effectively exposed in the stucco of the gable end and entrance detail and the patterned brickwork which ornaments the walls about the entrance and terrace porch. There is a rugged tone about these timbers which harmonizes well with the solid brick walls while the patterned brickwork forms a pleasing relief for the plain bond of the remainder of the brick-work.

No less effective, though not so conspicuous, is the window treatment, steel casements with small rectangular panes on the lower floor and diamond-shape panes in the windows of the upper floor. The use of brick for the window sills also adds its bit to the whole effect.

Nor should the entrance be overlooked in speaking of the more striking points about this home. The entrance detail is simple in the extreme, but the lines are so perfectly proportioned that they merit



Many Modern Apartments Have a Dressing Room Off the Living Room, in Addition to the Usual Rooms, so That It May Be Used, with Disappearing Beds, as an Extra Sleeping Room.

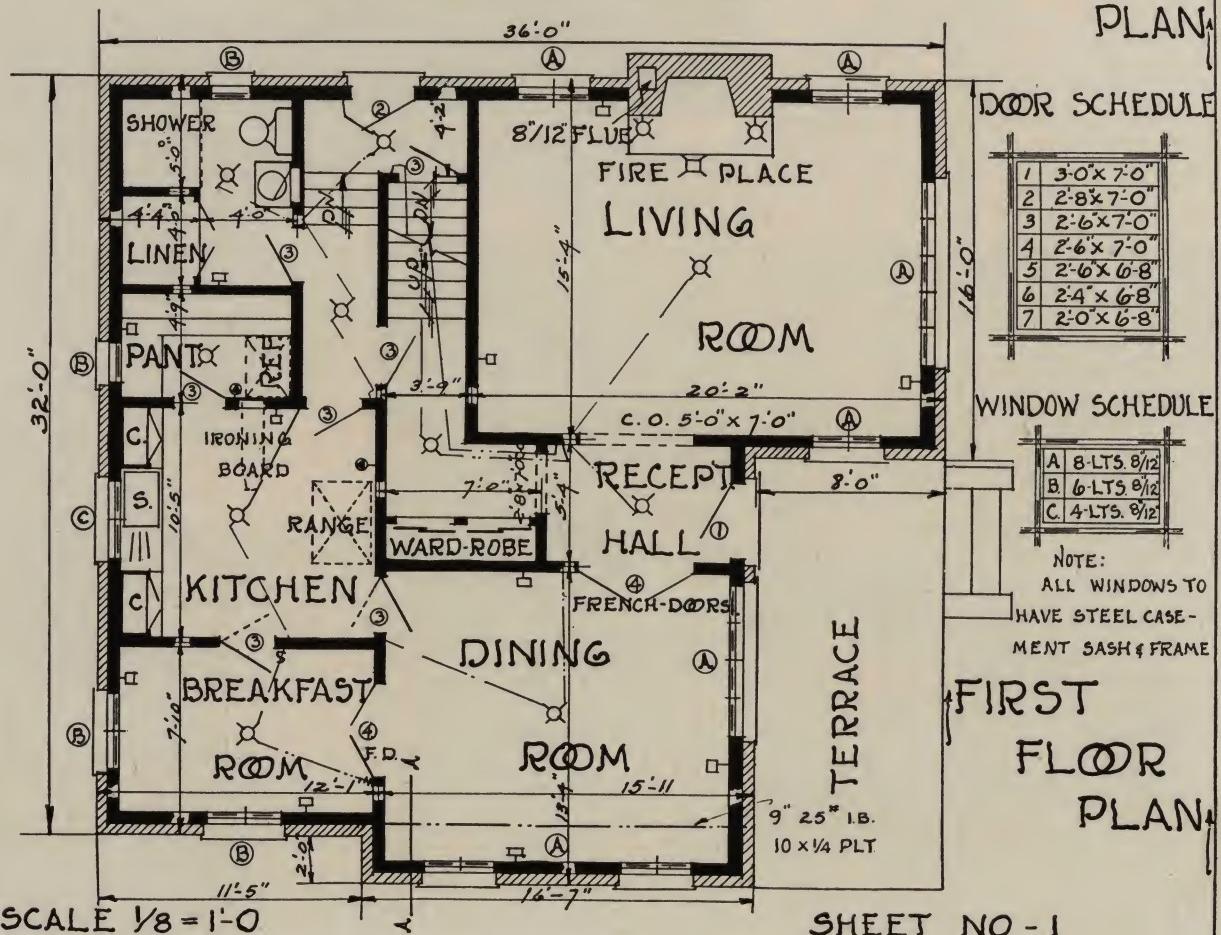
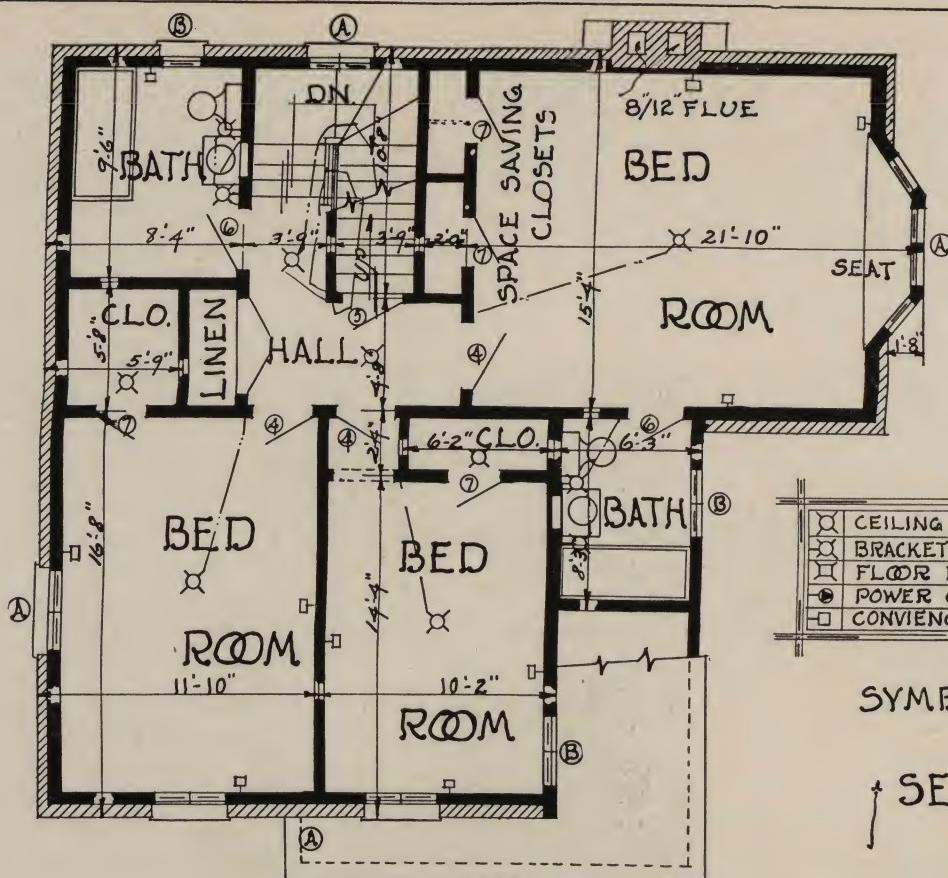


The Luxurious Equipment and Furnishings Installed in the Modern Apartment Hotel Are Well Indicated by This Picture. As fast as new devices come on the market which add to the comfort and convenience of guests, they are installed by designers and builders.

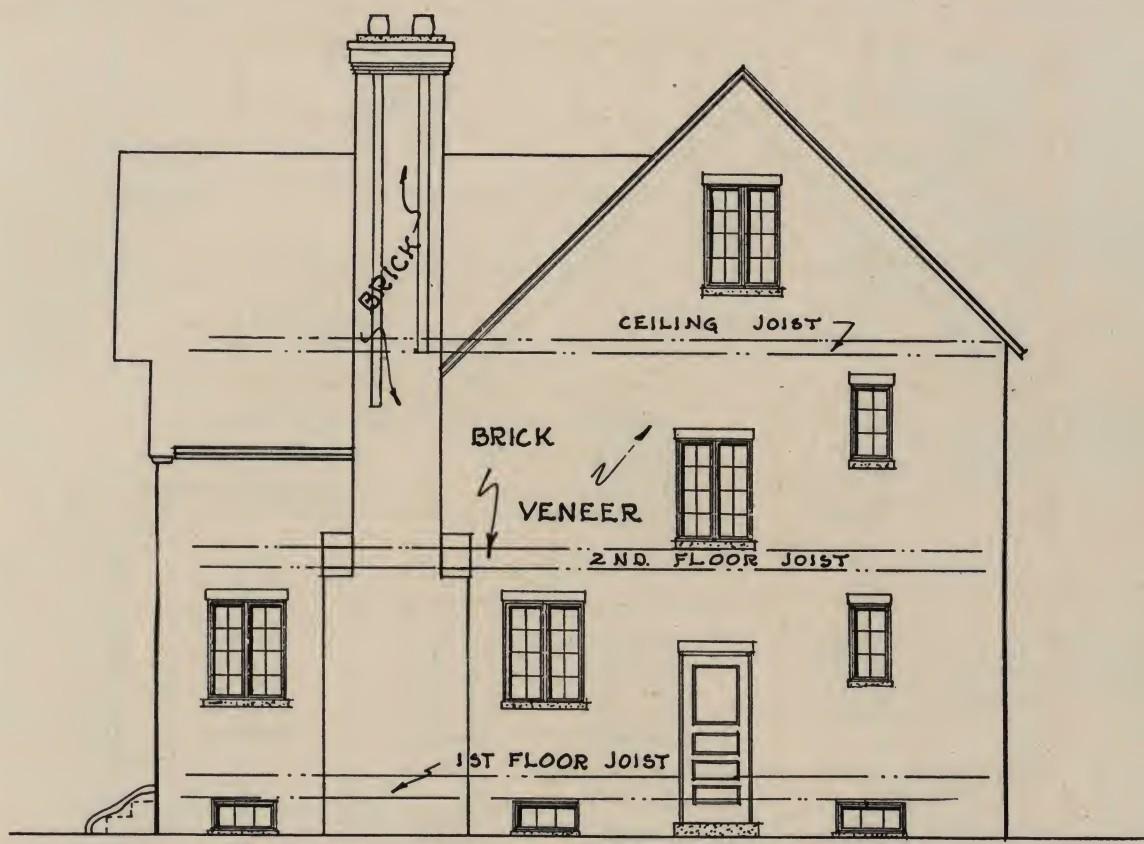
special mention and the heavy planking of the door, finished in natural grain and with its small window placed in an unusual but effective position, is particularly satisfying.

All these things join to form a picture of true beauty.

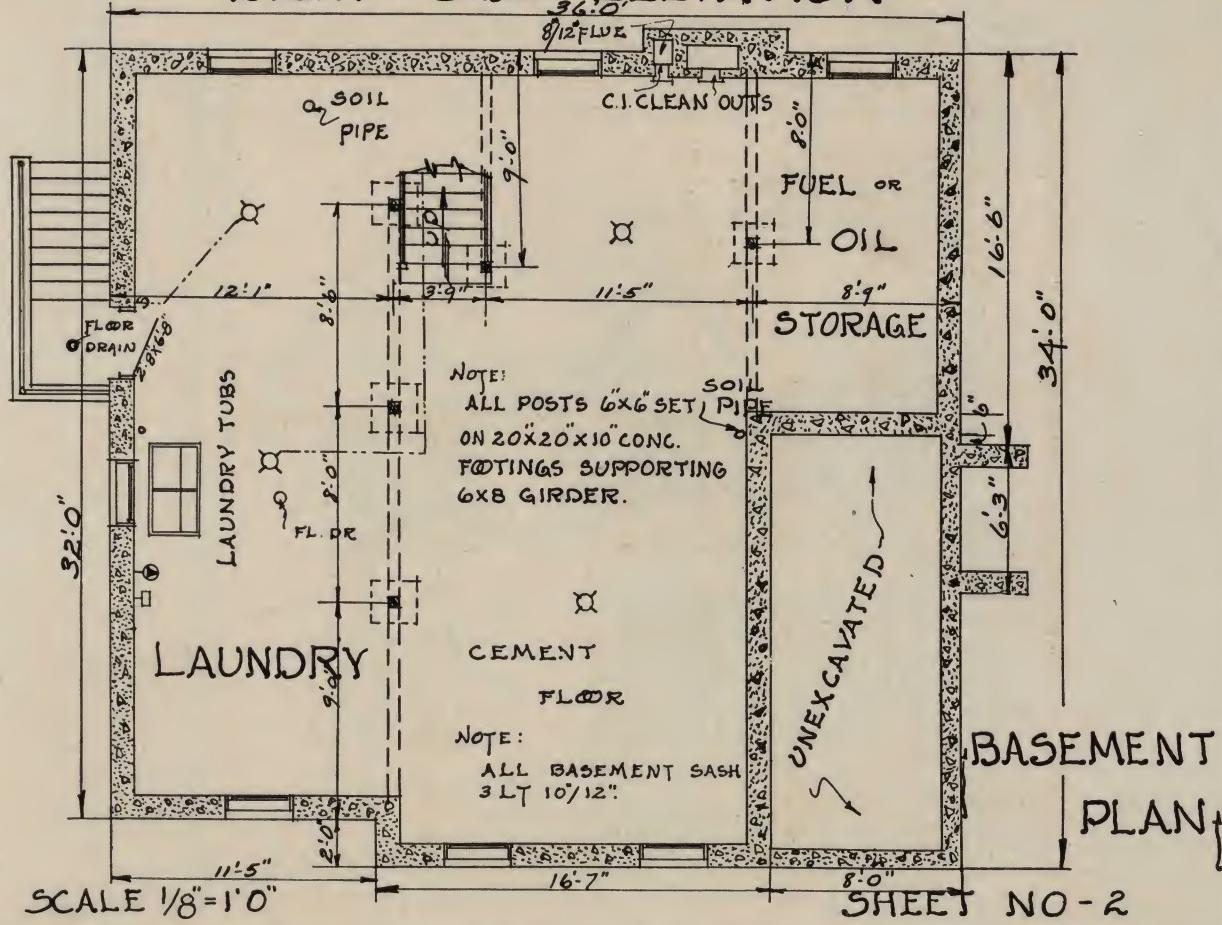




THE ANACONDA: Displays a Floor Plan Which Recommends Itself as Being Commodius and Convenient but Far Enough from the Strictly Conventional to Possess a Highly Desirable Individuality.



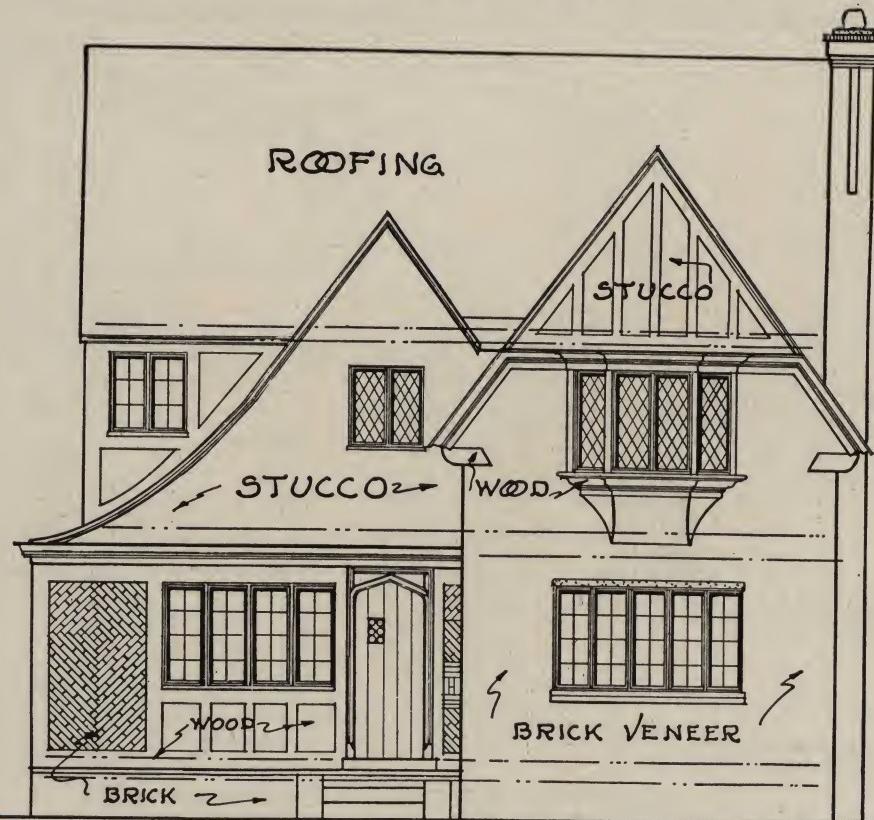
→ RIGHT - SIDE - ELEVATION ←



THE ANACONDA: The Right Side Elevation and Basement Plan Present Some of the More Prosaic but Highly Practical Facts About This Home and More of These Will Be Found on the Pages Which Follow.



→ LEFT - SIDE - ELEVATION ←

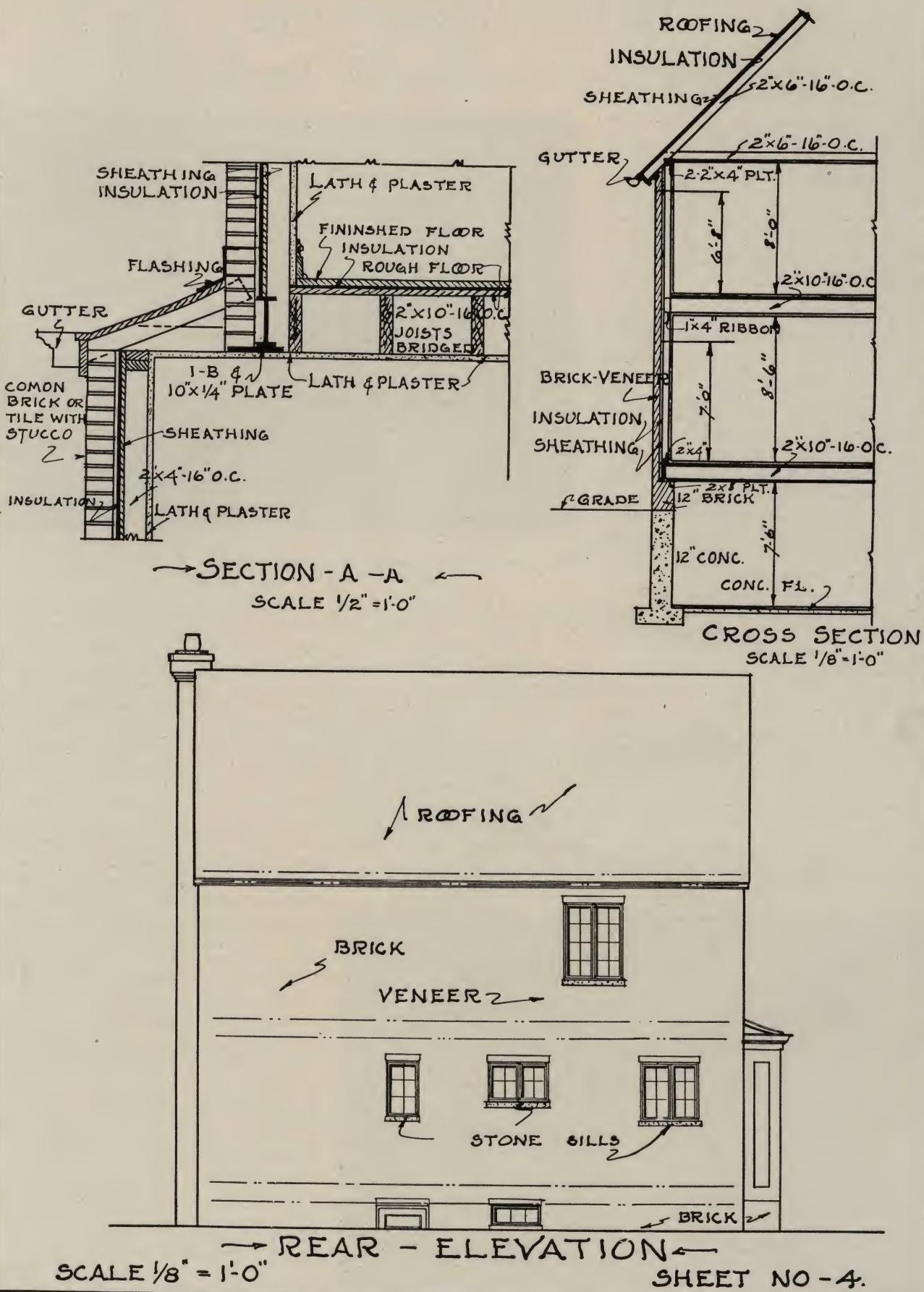


→ FRONT - ELEVATION ←

SCALE  $\frac{1}{8}$ " = 1'-0"

SHEET - NO. 3.

THE ANACONDA: Elevations of the Left Side and Front Tell Still More of the Construction of This House, Including the Pattern of the Ornamental Brickwork Used About the Entrance and Terrace.



# Better Plastering

## Ornamental Plaster Cornices and How They Are Made

In achieving that distinction in architectural treatment which lends special character to the interior of the home or apartment and sets it apart from others, architects and builders are coming to rely more frequently on the use of plaster cornices, either throughout the building or only in the parts which are most apt to be seen by visitors. Such rooms as the entry hall, living room, dining room and the sun room and in the more pretentious homes, the billiard and music rooms and quite frequently the master's and guest's bedrooms have their charm enhanced immeasurably by the use of plaster cornices, which add the finishing touch to the decorative beauty of plastered walls and ceilings.

No doubt this present day trend is directly traceable to the vast use of ornamental plastering in buildings frequented by the public. The superb vastness and fairy-tale-come-true interiors of the modern motion picture theatres could not have been achieved without the magnificent suspended ceilings of the dome type or of the barrel type, and literally miles of plaster cornices are used in connection with these so that the whole possesses architectural continuity of treatment.

Plaster cornices are merely mouldings with another name. True, some are so intricate and highly embellished that the word "mould" is inadequate to describe them properly. Many are comparatively simple in outline and yet even these are much more attractive than wood mouldings because they blend so much better with the plastered surfaces.

A very important advantage of run-in-place cornices is that they can be built into the building in a plastic state more economically than pre-cast cornices, the sections of which are aligned with difficulty because of irregularities in the wall or ceiling to which they are attached. The prob-

lem of securing such cornices in place is frequently difficult of solution, thus making the advantages of the run-in-place cornice quite obvious.

It should first of all be understood that cornices can be made of any size, design or detail. As the plastering art has progressed, modern materials such as metal lath and small channels, angles and tees have been developed so that no matter how large or intricate the design it is possible to execute it in plaster. However, the mechanics of running cornices in place makes it advisable to avoid moulds which have complicated re-entrant surfaces. These can be pre-cast in gelatin or loose-piece plaster molds and the same is true of the egg and dart and dentil mouldings or those with rosettes, medallions or similar decorative details.

It is quite common to see cornices run in place with recesses left for pre-cast ornaments to be subsequently set in place by the plasterer. More will be said about this later. The present article will be limited to the running of a small cornice as substantially all of the details encountered in its construction are equally applicable to large ones.

Reference to the illustrations exemplifies what has been said in the foregoing. Note the rather simple cornice mould used in the dining room, shown in Fig. 1, as contrasted with the more intricate one used in the lounge room shown in Fig. 2. The cornice in the latter is a combination of run-in-place and pre-cast cornice as described briefly in the preceding paragraph. The wealth of detail shown here adds the finishing touch to the picture.

With the architect's plaster details in front of him the plasterer considers the relation of the cornice to the other details such as beams, pilasters, etc., especially those parts which are at the level of the cornice and on which, unless the plan speci-



Fig. 1—A Dining Room with a Rather Simple Plaster Cornice as Contrasted with That in Fig. 2, Below.



Fig. 2—A More Elaborate Plaster Cornice, a Combination of Run-In and Pre-Cast, in the Lounge of the James Apartments, Designed and Built by T. H. McHale & Son, Syracuse, N. Y.

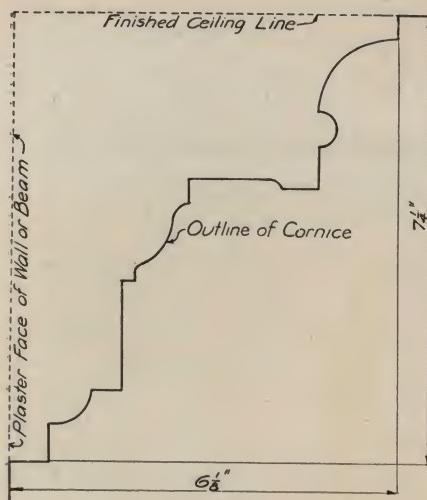


Fig. 3—Detail Outline of the Cornice Described in This Article.

to the approximate profile. The plaster is of fairly stiff consistency and should have a retarding element in it so that it will not set too rapidly. Moulding plaster especially suited for this purpose can be readily purchased in bags, but almost any gypsum plaster if properly handled will do. For the rough backing of the plaster, sometimes called the core, ordinary sanded gypsum plaster is used.

Let it be said at the outset that the work of running a cornice in place is not nearly so intricate as might be presumed. But attention to details and a considerable degree of accuracy is required and in order that nothing will be overlooked this article will detail carefully each of the various steps taken by the plasterer, proceeding from the plain wall and ceiling construction to the completed cornice.

The first step in cornice work is to make the template. This is usually a combination of wood frame and metal cutting edge. The latter is cut in accordance with full size details provided by the architect. The size and detail outlines of the cornice whose construction will be described in this article are shown in Fig. 3.

Before describing this important tool in detail it will be advantageous to glance at Fig. 4 which shows the completed template ready for use. Note that it consists essentially of a vertical sheet metal cutting edge attached to wood backing which in turn is secured and braced to a bottom piece with wood runner guide attached to its underside. It is very important that the relative position of cutting edge to guide be fixed accurately and securely. This is necessary for jobs on which there are many lineal feet of identical cornice and where a number of templates must be used. The advantages of their interchangeability is readily

fies otherwise, a portion of the cornice will be run. With this determined, the plasterer is ready to start.

Plaster cornices, briefly, are run in place by running cutting surfaces, with profile corresponding to the outline desired, back and forth along guide strips attached to wall or ceiling or both, while soft plaster is being applied

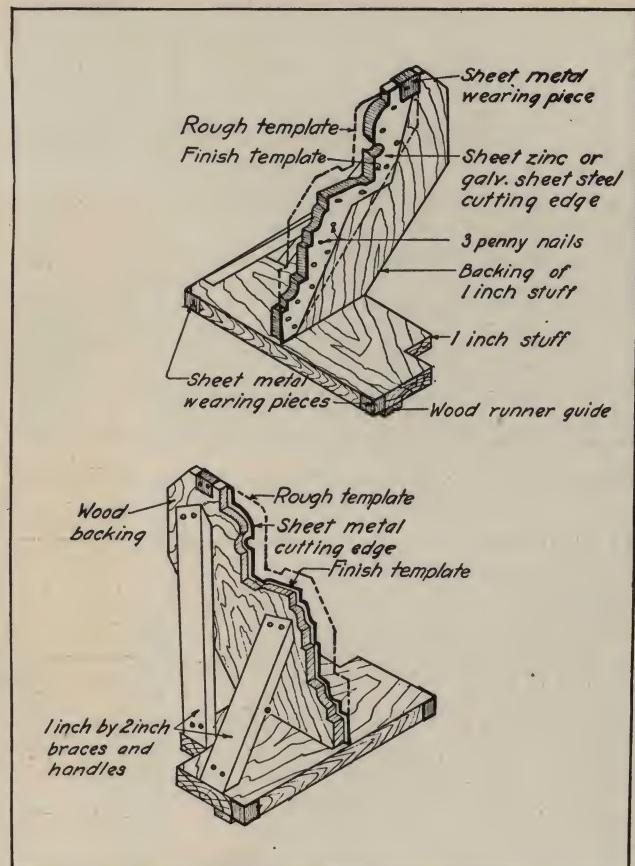


Fig. 4—The Completed Template, Used in Running the Cornice Described.

apparent. Because they are so frequently used on work overhead the frame should be as light as is consistent with rigidity.

Cutting out the sheet zinc or galvanized sheet steel cutting edge is the first step in making the template. The strip need only be a couple of inches wide and can be made of several pieces. It is only necessary that the cutting edge be without break as any gap, V-cut, etc., will form a projection of corresponding size on the finished cornice. The exact outline can be traced directly from the architect's drawing or can be transferred by means of carbon paper from the architect's drawing.

After tracing the outline of the zinc onto the wood, a second line back about three-sixteenths to a quarter of an inch from the outline as shown by the zinc should be drawn. It should then be taken to a carpenter shop and cut out on a band or jig saw to the second line. The projection of

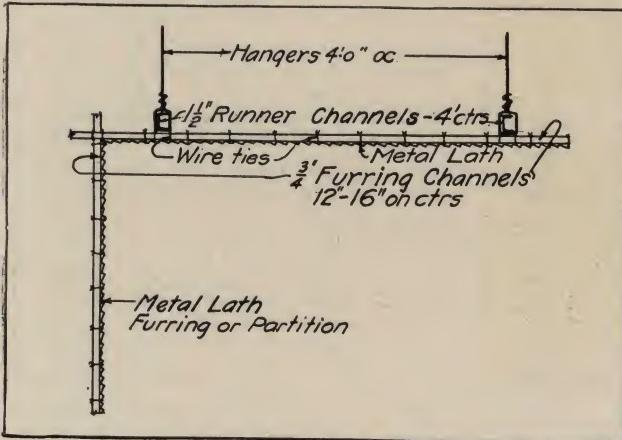


Fig. 6—Typical, Suspended Ceiling Construction.

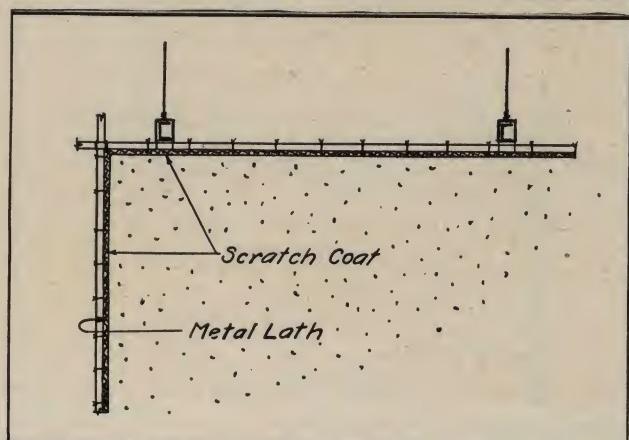


Fig. 7.—The Scratch Coat Is Applied in the Usual Manner.

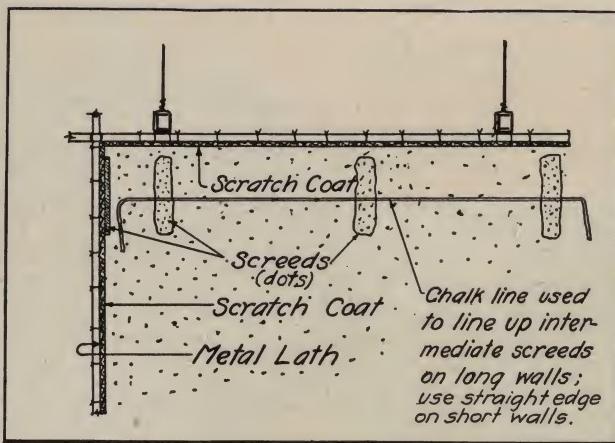


Fig. 8—It Is Very Important that the Screeds Be Perfectly Aligned. A chalk line is used.

the sheet metal beyond the wood is necessary to keep the cutting edge clean, but it should not be back too far, otherwise it will permit the metal to bend and deflect when applied against the hardening plaster. The backing should be of 1-inch stuff. The next step is to nail the galvanized cutting edge to the wood backing with the projection as shown in the figure; ordinary three penny lath nails should be used.

The making of the rough template is the next step. This is indicated by the dotted line in Fig. 4. Note that it represents the cutting surface of about 1 inch in towards the plaster core and away from the finished edge. This is more clearly shown on the diagram in Fig. 5. The space between the two cutting edges represents the finish coats of plaster. It is not necessary to take extreme care in laying out the outline of the rough template, but in general, it should parallel the finishing cutting surface approximately so that not more than about 1 inch of finish material need be applied.

As a matter of fact, the rough template is sometimes only used for cutting—frequently it is merely a guide by which to worm the plaster core and fill out the surfaces so that they will be kept back the proper distance from the fin-

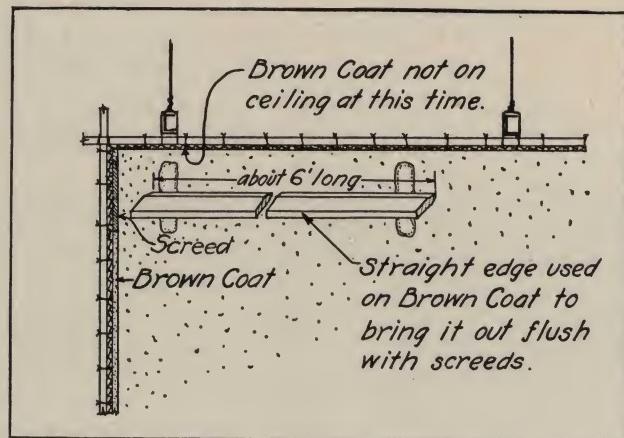


Fig. 9—With the Screeds in Place a Straight Edge Is Used in Applying the Brown Coat Between.

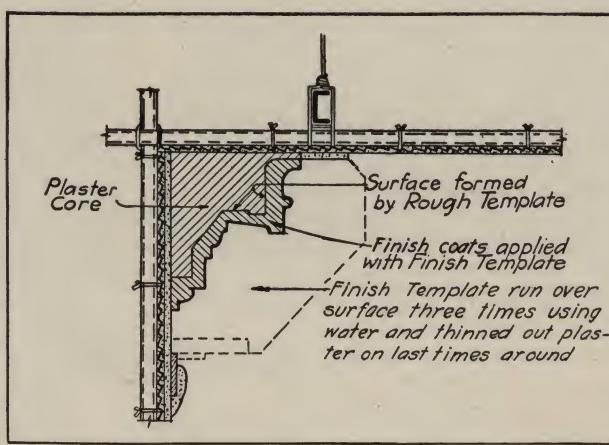


Fig. 5—A Space Between the Cutting Edges of Rough and Finish Templates Represents the Finish Coat.

finished surface and allow enough finishing coat to be applied over every point. The rough template is also made of sheet metal and is tacked over the template with the finished cutting edge on it. It should not be nailed too tightly as it has to be removed when the finishing is to be done.

The rough and finish templates on the wood backing are then nailed to the lower part of the wood frame and braced as shown. These braces also act as handles for pushing the template against the setting plaster and should be securely nailed as the template will be given much usage.

It is important that the vertical or cutting edge of the template be made exactly perpendicular to the lower or runner part and also perpendicular to the wood runner guide which has been nailed to the underside of the bottom piece. Next the sheet metal wearing pieces at the two ends of the bottom running piece and also at the top of the template are nailed on.

With the template completed we are ready to start the preliminary steps necessary to run the cornice. It should be stated here that cornices can be run in angles between ceilings or on walls or partitions of almost any ordinary plaster base such as masonry, plaster block or metal lath.

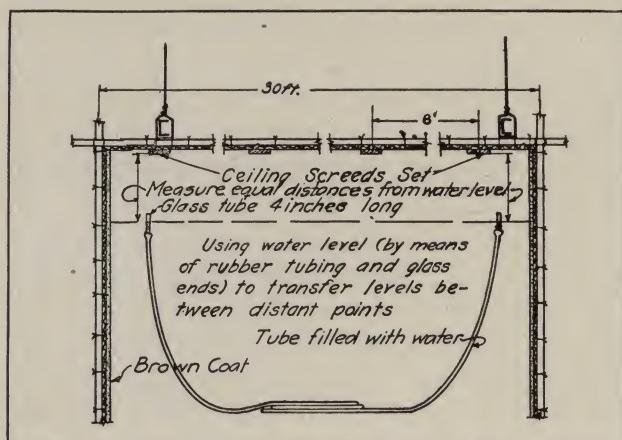


Fig. 10—In a large Room a Water Tube May Be Used to Align the Screeds.

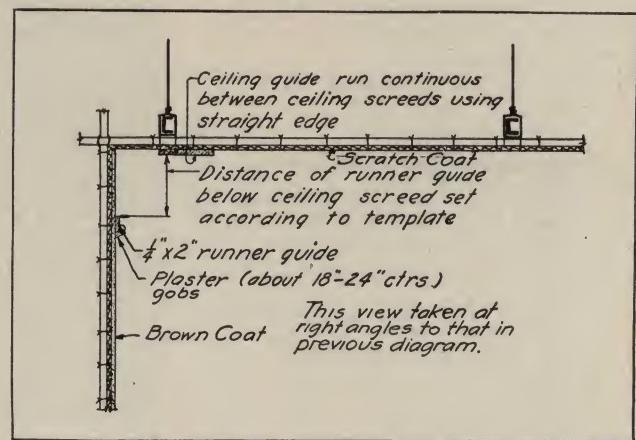


Fig. 11—Wood Guides Are Used on Wall and Ceiling When Applying the Template.

However, as metal lath ceilings are used on ornamental work, and especially on suspended ceilings and ornamental plaster beams, we will assume for this problem that this cornice is applied at the juncture of a metal lath suspended ceiling and a metal lath partition.

Fig. 6 shows typical suspended ceiling construction with metal runner and cross furring channels with the metal lath wired to the runner channels on 6-inch centers in accordance with customary practice. The partition is made up of small metal channels 16 inches on centers to which metal lath is wired. Where the vertical channels intersect the runner channels of the ceiling, the two are wired together.

The scratch coat of plastering is applied in the usual manner over the entire ceiling and walls of the room, Fig. 7. After this, screeds, commonly called dots by the plasterer, whose distance out from the plaster face represents the surface of the brown or straightening coat, are applied at about 6-foot intervals along the wall. Screeds located at either end of the wall are used as guides. The



Fig. 13—The Portion of the Cornice at the Right Is Seen as Produced by the Rough Template While That at the Left Is Finished.

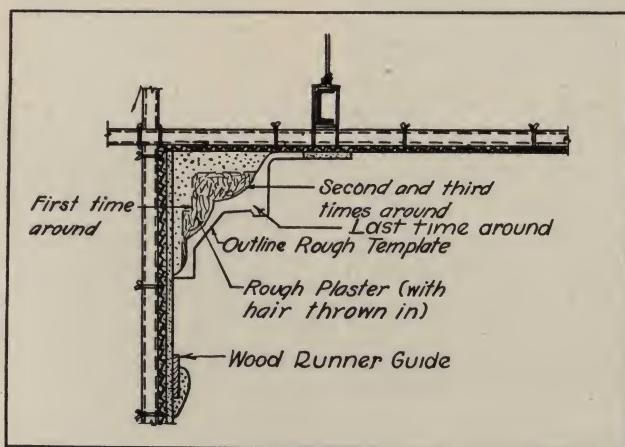


Fig. 12—Diagram Showing the Various Steps in Building Up a Cornice to the Outline of the Rough Template.

position of these end screeds should be such that the brown coat will at every point clear any humps in the wall. Between these points on a long wall, a chalk line is used and the intermediate dots are brought out to line. It is very important that the screeds be perfectly aligned as any irregularity in the brown coat at the point where the cornice is to be applied will magnify any irregularities in the cornice as they are more easily seen in the latter. With the screeds in place the plasterer's straight edge is used in applying the brown coat between. See Figs. 8 and 9.

Next, the ceiling screeds for the brown coat are set—these are also applied on approximately 6-foot centers using the line of the brown coat on the ceiling at the two ends of the room as guide. As a chalk line is bound to have some sag, it is necessary to use some kind of a water level in order to set the intermediate screeds.

In a long room the easiest way to accomplish this is to use a hose or tube of about  $\frac{3}{8}$  or  $\frac{1}{2}$ -inch diameter filled with water with small glass tubes about 4 inches long at either end. See Fig. 10. This is merely an extended level line as the location of the water level in the glass tubes at all times indicates a horizontal surface. For short distances not exceeding 8 to 10 feet, the ordinary level used by the plasterer, together with a straight edge where the distance is greater than 4 feet, should be used to level up intermediate screeds or points where special accuracy is desirable.

With the screeds in position along the ceiling, the plasterer then applies the brown coat in between, using his

long straight edge to get a ceiling as nearly perfect as possible. It should be noted that it is not essential to set screeds on any portion of ceiling excepting where the cornices are to be run. On better jobs, however, screeds are used quite freely on other places on the ceilings to secure the best results.

The importance of having a straight surface between the screeds, on the portion where the cornice is to be run cannot be overemphasized as this portion of the ceiling acts as the proper guide for the template.

The wall runner guide is next put in place. It serves as a support on which to rest the template as it is pushed back and forth, and at the same time acts as a guide to insure a cornice with true straight lines. It usually consists of a  $\frac{1}{4}$  by 2-inch strip of wood which should be as straight as possible. Any pieces that are badly warped or twisted should not be used. The wall runner guide is set the proper distance down from the angle of the wall by applying the template firmly into the angle between wall and ceiling and setting the guide so that it will fit snugly under and against the wood guide on the underside of the horizontal piece of the template (see Fig. 11).

As the wall strip is merely temporary it is firmly but not permanently attached to the plaster, being held in place by gobs of plaster at intervals of 18 to 24 inches. It is set accurately by applying the template along the wall at intervals, one man holding the template, the other one aligning the wood strip and applying the gobs of plaster.

The setting of the wall runner is done all around on the walls of the room excepting on narrow pilasters and in jogs in the wall surface where it is impractical to manipulate the template so as to run the cornice in place. The matter of running and setting cornices for such places will be discussed in a later article.

The job is now ready for running the cornice. Complete details and diagrams showing how this is done will next be described.

Fig. 12 is a diagrammatical illustration of the various steps taken in building up the rough plaster core. There are several steps as indicated in this diagram, beginning with the first rough application of plaster with the trowel, then the placing of the rough intermediate "filling" containing fibre or hair so that it keeps just back of the rough template and then the running with the template to the rough outline. On a large cornice some hair is usually necessary in the last coat in order to offer a better bond for the finishing coats.

The plaster is applied in big "dabs" on the backing of the plaster cornice using the same plaster as is used for

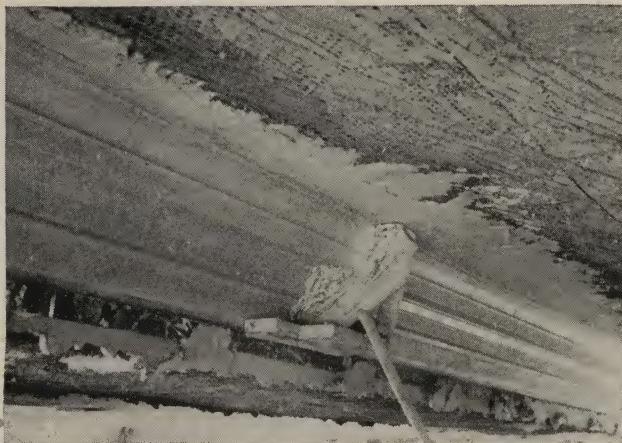


Fig. 14—The Finishing Template as It Appears in Use.



Fig. 15—The Juncture Where Cornices Meet in a Corner.

scratch coats in other parts of plastered walls. Generally an extra amount of fibre should be used in this portion in order to stiffen the thick dabs of plaster so they will stick in place. When this has been completed for as long a section as can be handled before the plaster sets up, the plasterer puts his rough template up against the wall and resting it on the wall runner pushes it along, cutting the surplus plaster off and applies more plaster until the surface conforms to the outline of the template. The wall runner is attached to the wall by means of gobs of plaster which hold it in place while in use and are easily removed when the cornice has been run.

When completed the surface formed by the rough template bears the relation to the finished outline of the cornice as shown in Fig. 2. See also Fig. 3 for a comparison. The rough plaster base ready for the finishing coats is shown at the right and the finished plaster cornice at the left. This picture also shows very clearly the rough plaster on the ceiling.



Fig. 16—A Close Up of a Finished Column Cornice in Place.

The cornice is now ready for the finishing coats. The first thing to do is to scrape the rough template clean and nail the finish template cutting edge over it. See Fig. 4.

The application of the finished plaster is usually done in three or more separate operations. It is usually a two-man job, the helper putting the plaster on just ahead of the template as it is pushed ahead by the plasterer. The plaster is applied over the rough plaster cornice to the approximate thickness to be cut down by the template.

The first time around there are naturally a lot of pockets because the work must be done rapidly in order to prevent the plaster from setting so hard that the template will not be able to cut it. For this reason there is only a relatively small amount of plaster applied each time. On the second and third time around, all the voids are filled in with thin plaster to make the arrises clean cut and sharp and on the final round a very thin coat of plaster of soupy consistency is applied with a brush and the surface is given its final finish with the template.

Fig. 14 clearly shows the template, which for the sake of the picture has been propped up against the cornice.

Fig. 15 shows the juncture of the finished cornice on the wall at the left with the finished cornice on the beam at the right. Fig. 17 shows a table used for this purpose. On big jobs a table with a marble top is sometimes used in order to make a cleaner cut job, but for ordinary purposes any table can be used providing it has a level top. As a rule, the table is from 8 to 12 feet long so that a long piece of cornice can be run at one time.

The same template, see Fig. 4, as was used to run the cornice on the wall is used on the table. In order to lessen the difficulties in mitering the cornice in place it is customary to run table work over a bed of wet sand or clay so that substantially all that is run in plaster is only the thickness of the finished plaster, from one to two inches thick. It is then cut with an ordinary carpenter's saw and stuck in place with neat gypsum and fibre. The finished cornice job is shown in Fig. 16.

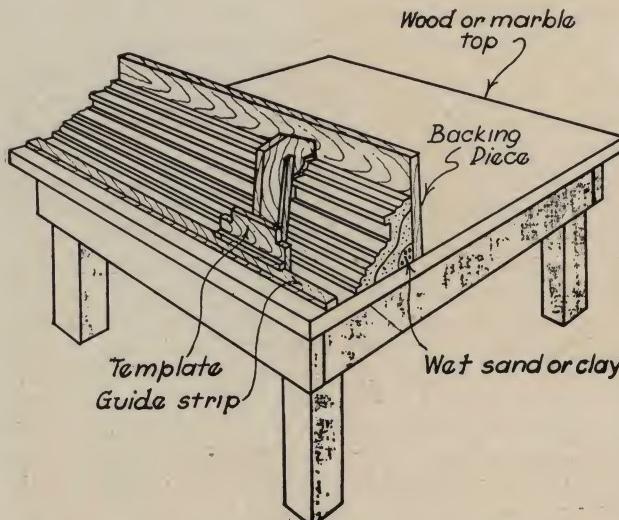


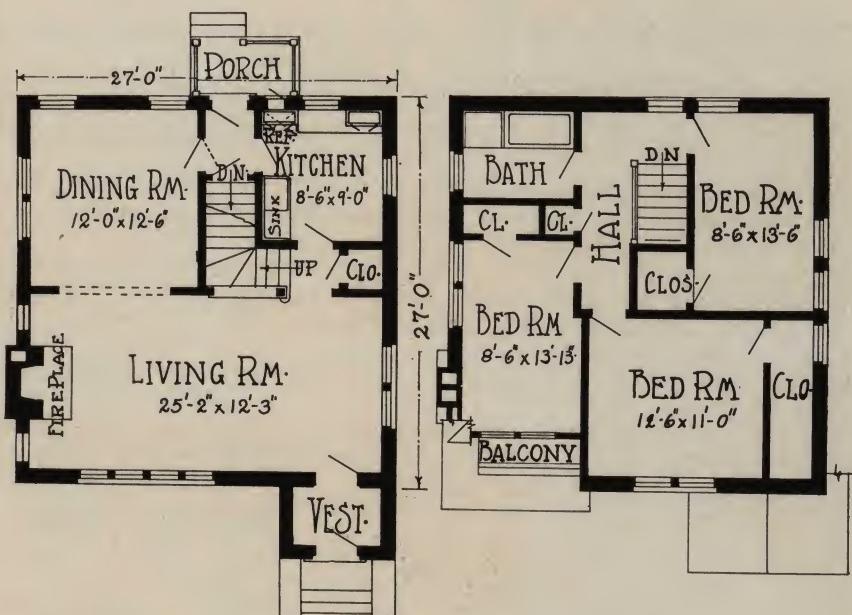
Fig. 17—Table for Running Cornices to Be “Stuck” in Place as in the Corner Shown in Fig. 15.

# A Small English Style Home

A TYPE of English architecture, a home that is exactly square, measuring slightly over 26 feet at the foundation and with a very unusual arrangement considering the size, is shown in the accompanying illustration and plans. The roof and walls are so well broken that the residence will attract attention wherever it is duplicated. The arrangement is practical and convenient.

The stoop and vestibule give entrance into a large living room, with a large fireplace to make it cozy on cold winter nights. Bookcases are built along the wall on either side beneath the windows. Plastered arches in the long inner wall reveal the stairway and dining room beyond.

A short passage leads to the kitchen where we find a number of conveniences. A closet has been planned between the living room and kitchen and a space has been set aside for two large cabinets with a work bench between and ample light above.



The Square Plan Affords the Greatest Amount of Space in Proportion to the Cost of Building and Space Which Can Be Effectively Used.



Done in the English Style, Here Is a Small Home Which Will Attract Attention and Be Remembered Not Only for Its Charming Appearance but for Its Compact and Convenient Arrangement.

# The Andrews

**The Single Story House May Be Made Altogether Charming When Skilled Design Is Combined With Good Materials and Workmanship**

(For Perspective in Full Colors See Page 129.)

IT is safe to venture that even the most severe critic of the bungalow would be completely disarmed if he were given an opportunity to view the fascinating little house which occupies the place of honor on page 129. It is, in every way, a most delightful dwelling with just that air of withdrawn and modest dignity, tempered by a warm friendliness, which we all like to associate with the word "home."

The simple brick walls with their arched openings have none of the faddish or purely ornamental features of which one so quickly tires and, many years hence, they still will be as satisfactory as the day that they were built.

But perhaps most important of all, in attaining real beauty in a single story dwelling, is the treatment of the roof lines. All too often the bungalow home looks like a box with a nearly flat, mushroom-like roof for a lid and it is this effect which is the most serious defect in this type of house.

Here, however, we find nothing of the sort. In the photograph reproduced below, and further in the elevations shown on the pages following this, we see how fairly high gables can be used to break up the roof expanse, give an effect of height and produce four pleasing

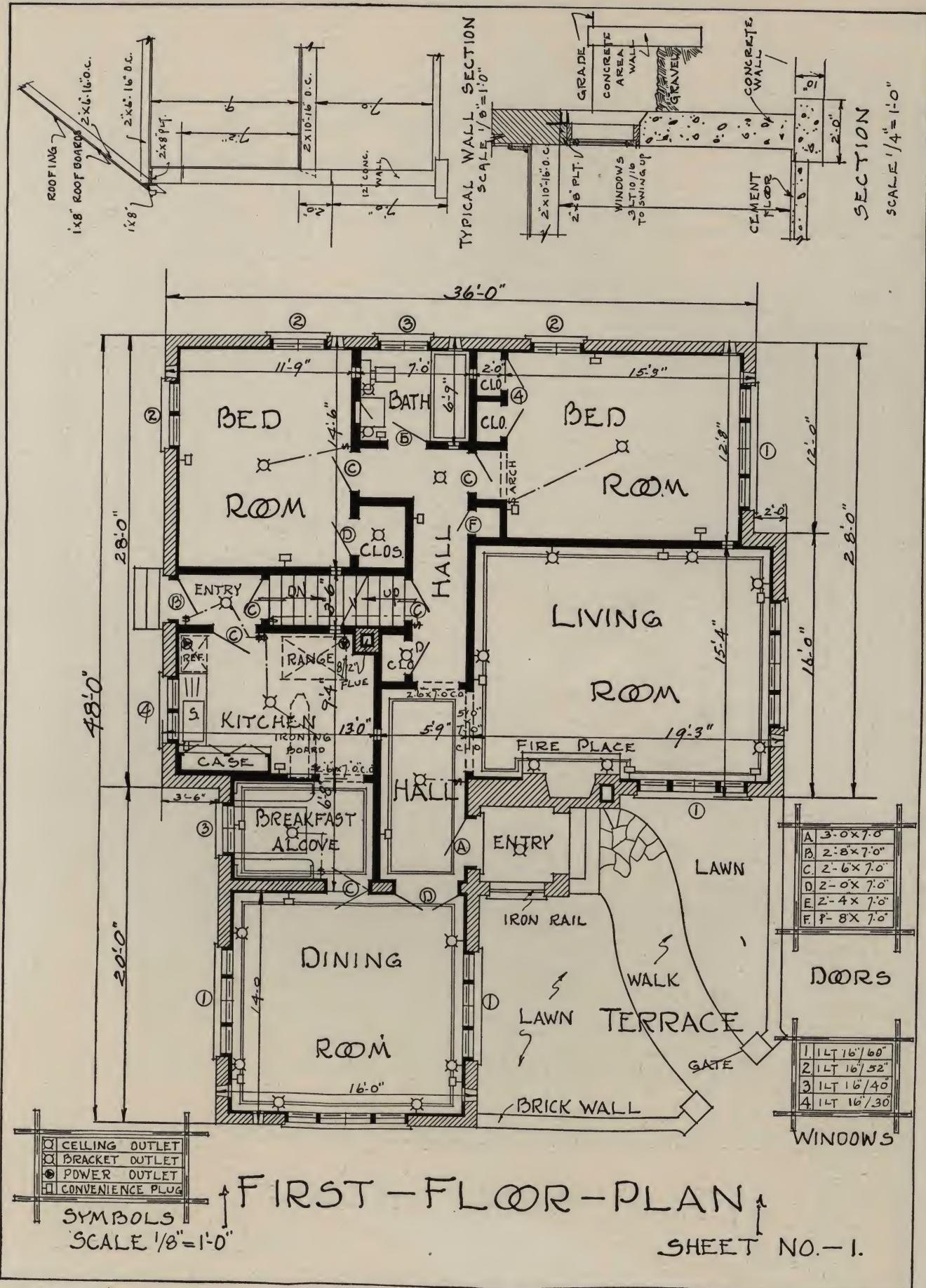
elevations by the elimination of that flat, horizontal appearance which we all dislike.

Again turning the pages to the floor plans of this house, we find an interior which is no less satisfactory than the exterior which has charmed us by its beauty. Here is a compact arrangement of essential rooms which leaves little to be desired in the way of home comfort for the small family. First of all there is an entry which is sheltered from the elements, a decidedly important point in bad weather. This entrance, instead of thrusting the visitor into the midst of the living room activities admits him to reception hall. From this reception hall one may pass directly to the dining room and kitchen or to the bedrooms as he may desire.

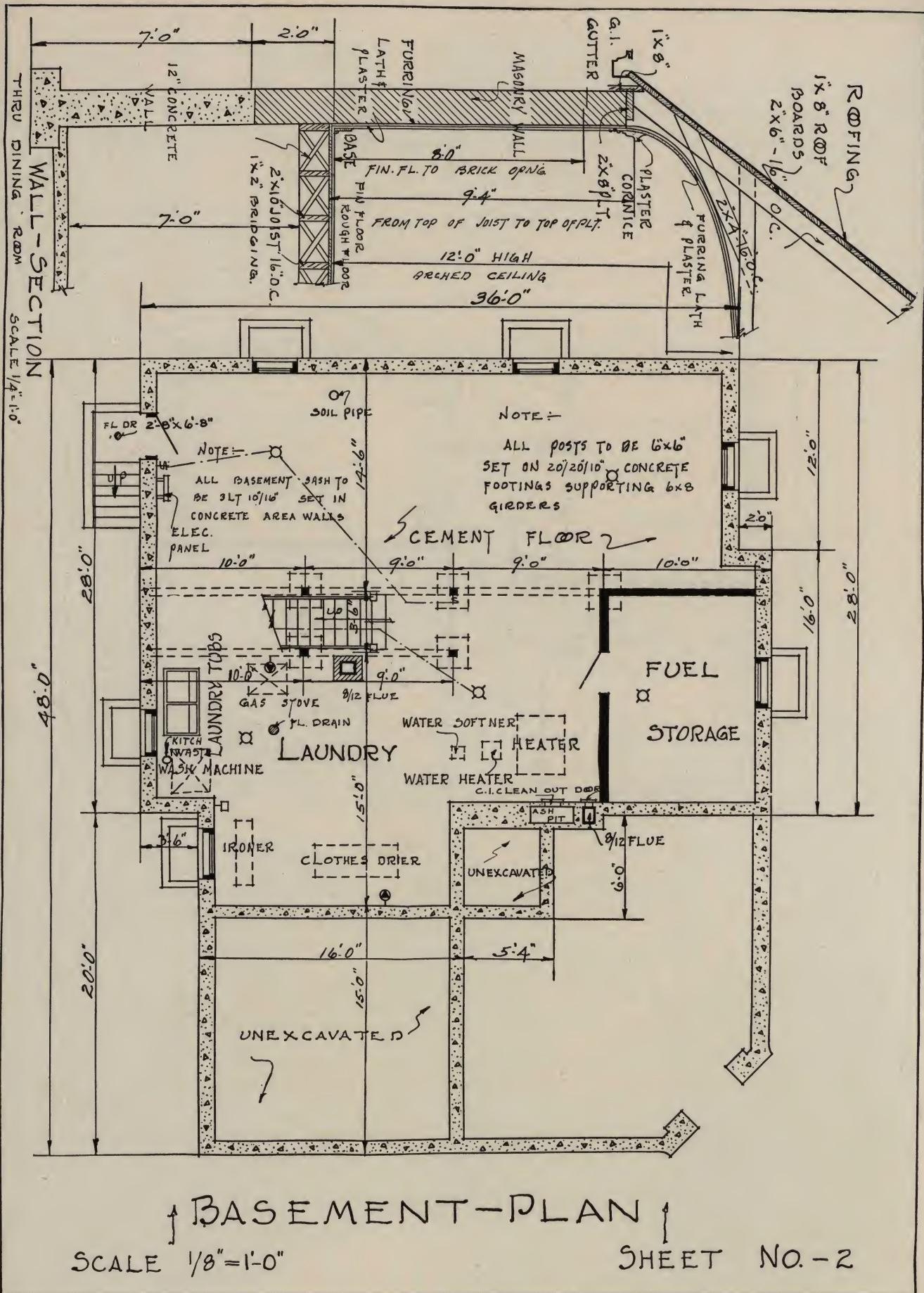
The kitchen is completely separated by solid walls, as well as the hallway, from the living room and bedrooms. There is also a desirable separation of the dining room and kitchen by the breakfast nook between. Again the bedrooms with bath between are placed at the end of the hallway where they do not intrude upon the living room and will not be disturbed by its noises. Last of all the kitchen is provided with a really convenient though inconspicuous service entrance at one side of the house.



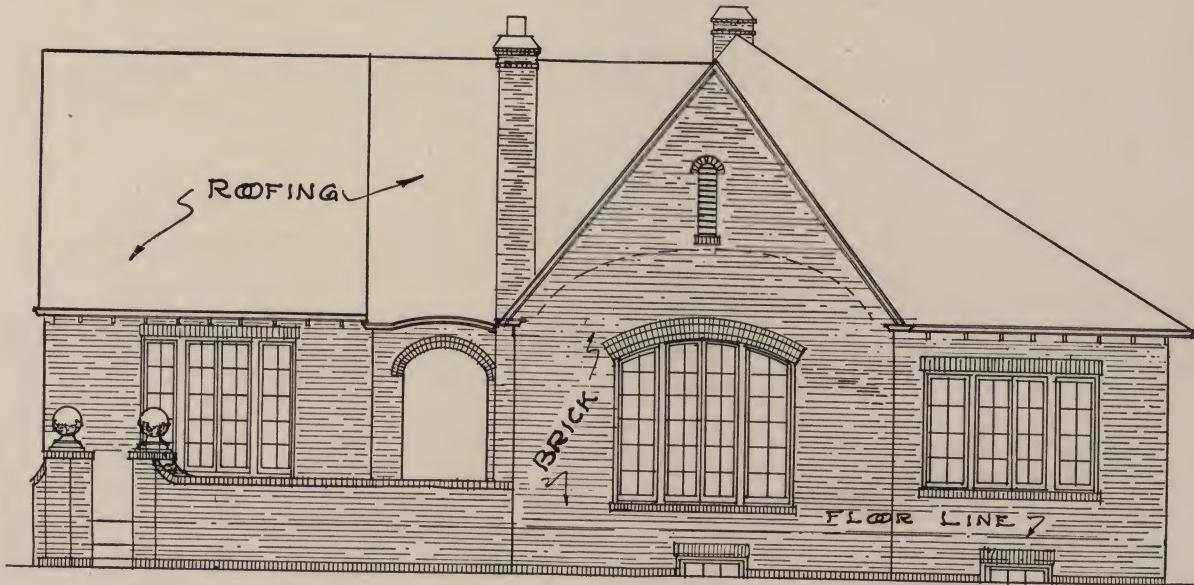
**THE ANDREWS:** In this home the single story dwelling is seen at its best with roof lines that are well broken in each elevation as shown in the plans on the following pages.



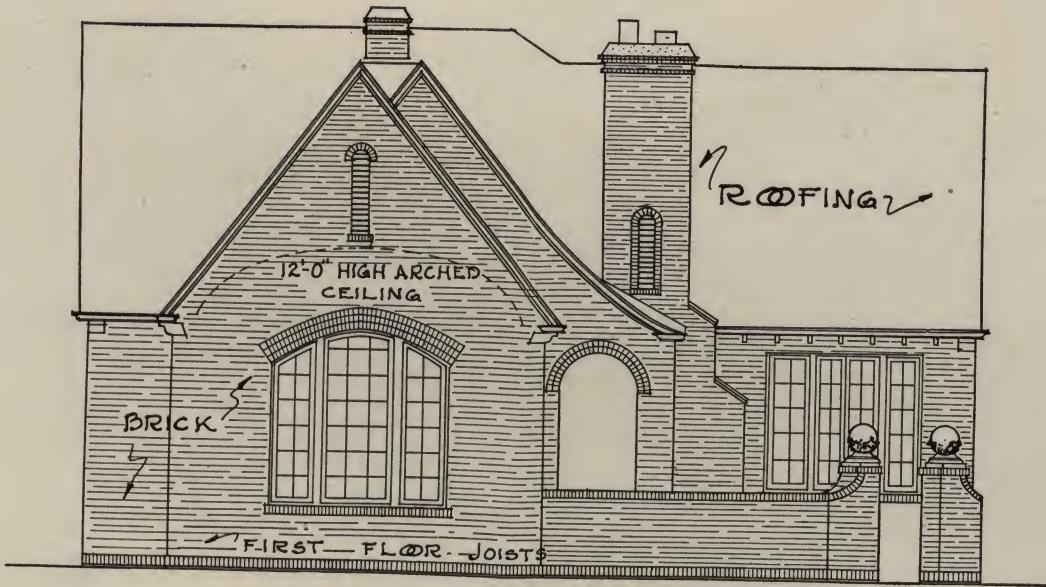
**THE ANDREWS:** The floor plan of this home displays a room arrangement in which every desirable feature in home planning has been achieved.



**THE ANDREWS:** This basement plan shows how much can be done by means of modern equipment to take the drudgery out of the working portion of the home. For further plans turn to the next page.



RIGHT - SIDE - ELEVATION

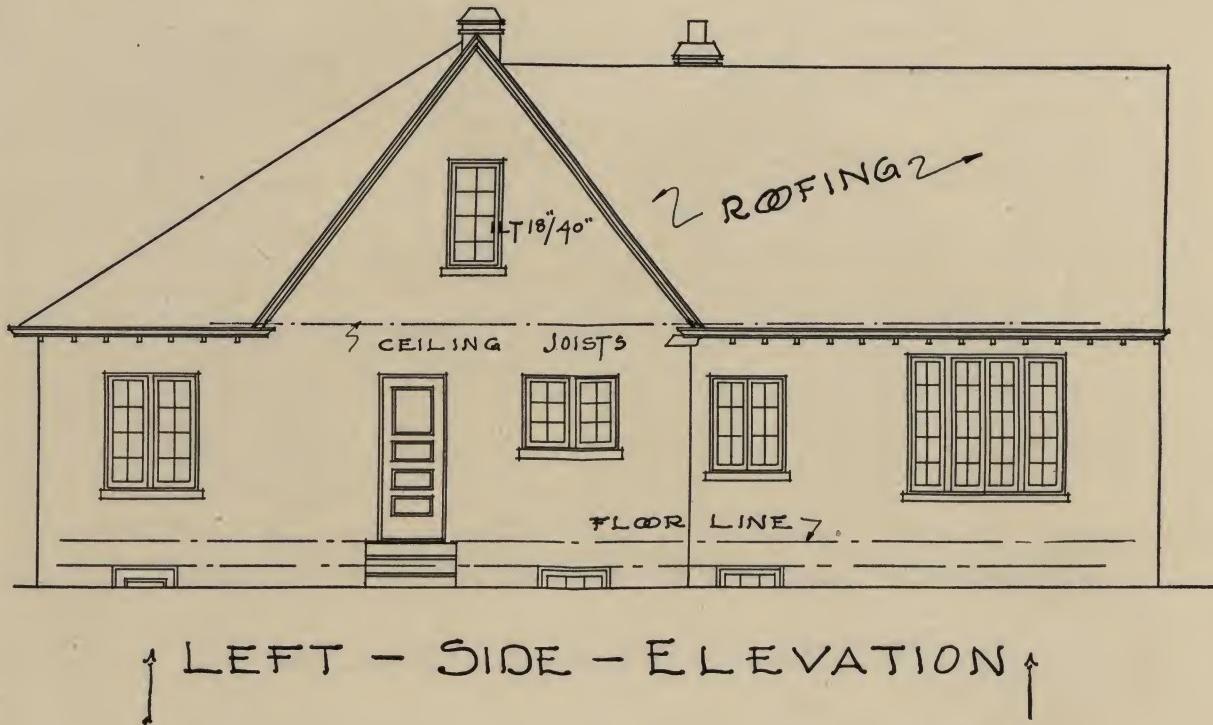
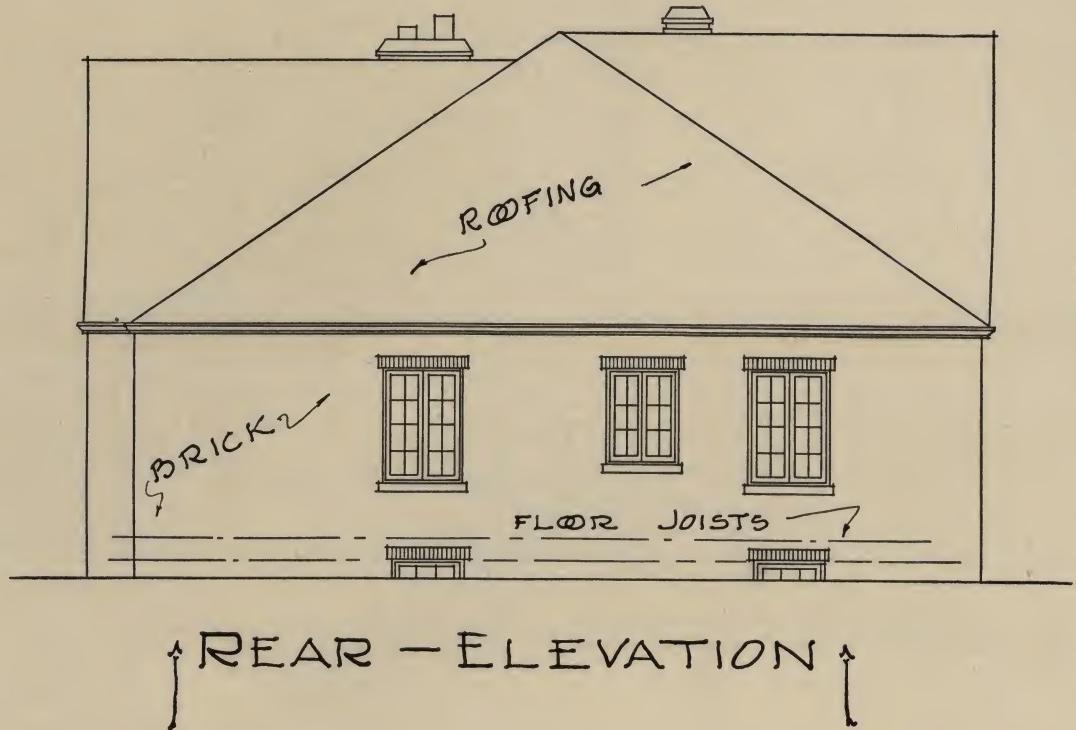


FRONT - ELEVATION

SCALE  $1/8'' = 1'-0''$

SHEET NO - 3.

THE ANDREWS: These elevation drawings of this home indicate, even more clearly than the photograph, how the roof lines have been handled to obtain an effective design.



SCALE  $1/8'' = 1'-0''$

SHEET NO.-4

THE ANDREWS: Even the rear elevation displays a roof expanse which is broken in an interesting and attractive manner completely rounding out the pleasing exterior of this home.

## *The ANDREWS*

A SUBSTANTIAL Modern Home Design. For Complete Building Plans—Working Drawings to Scale See Pages 125, 126, 127 and 128.





## *The ANTLERS*

A CHEERFUL Bungalow Design. For Complete Building Plans—Working Drawings to Scale See Pages 132, 133, 134 and 135.



# The Antlers

**A Story and a Half House, with Insulated Roof, That Provides a High Degree of Comfort and an Attractive Dwelling Place**

(For perspective in full colors see page 130.)

**I**N addition to the pleasing appearance which it makes against its background of snow-laden trees, this home possesses a large number of points which recommend it to the family considering the all-important problem of building a new home. In the first place it is well designed to fit the lot upon which it has been placed.

It has been most effectively tied into its setting by the well selected planting of shrubbery. Its exterior design is simple but artistic and nicely balanced. The expanse of windows at the front gives one the feeling that the interior will be well lighted and airy and the ornamental brick work about the porch, above the foundation line and around the windows sets off the plain stucco walls.

This home is of the story and a half type and adapted to the requirements of the growing family of limited means. The first floor is a complete home in itself, of sufficient size to comfortably accommodate a small or moderate sized family. The rooms of the second floor may, if desired, be left unfinished at the time of building to relieve the pressure of immediate expense. Later, when changing conditions demand the extra space and increasing

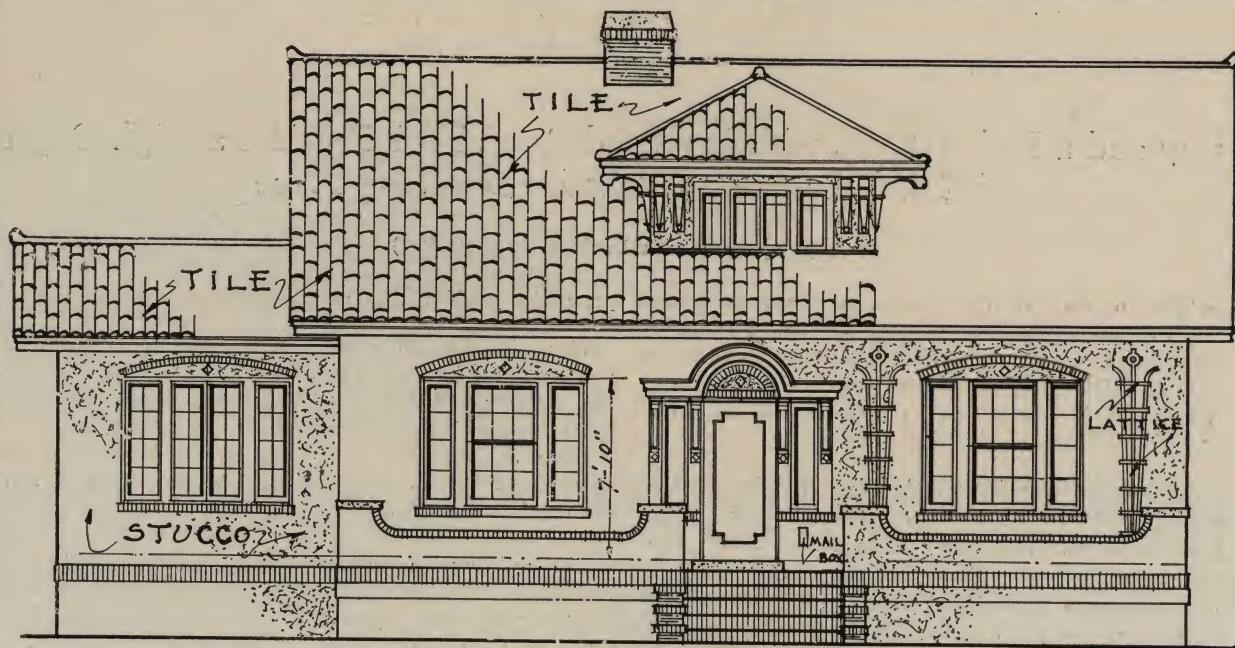
prosperity justifies, they may be finished.

This will add two more bedrooms to the two already in use, another bathroom and a sewing room or play room for the children. This plan, of course, involves somewhat more expense in the long run but is one which may make possible the building of a home that will not only take care of all present requirements but provide as well for the requirements of future years.

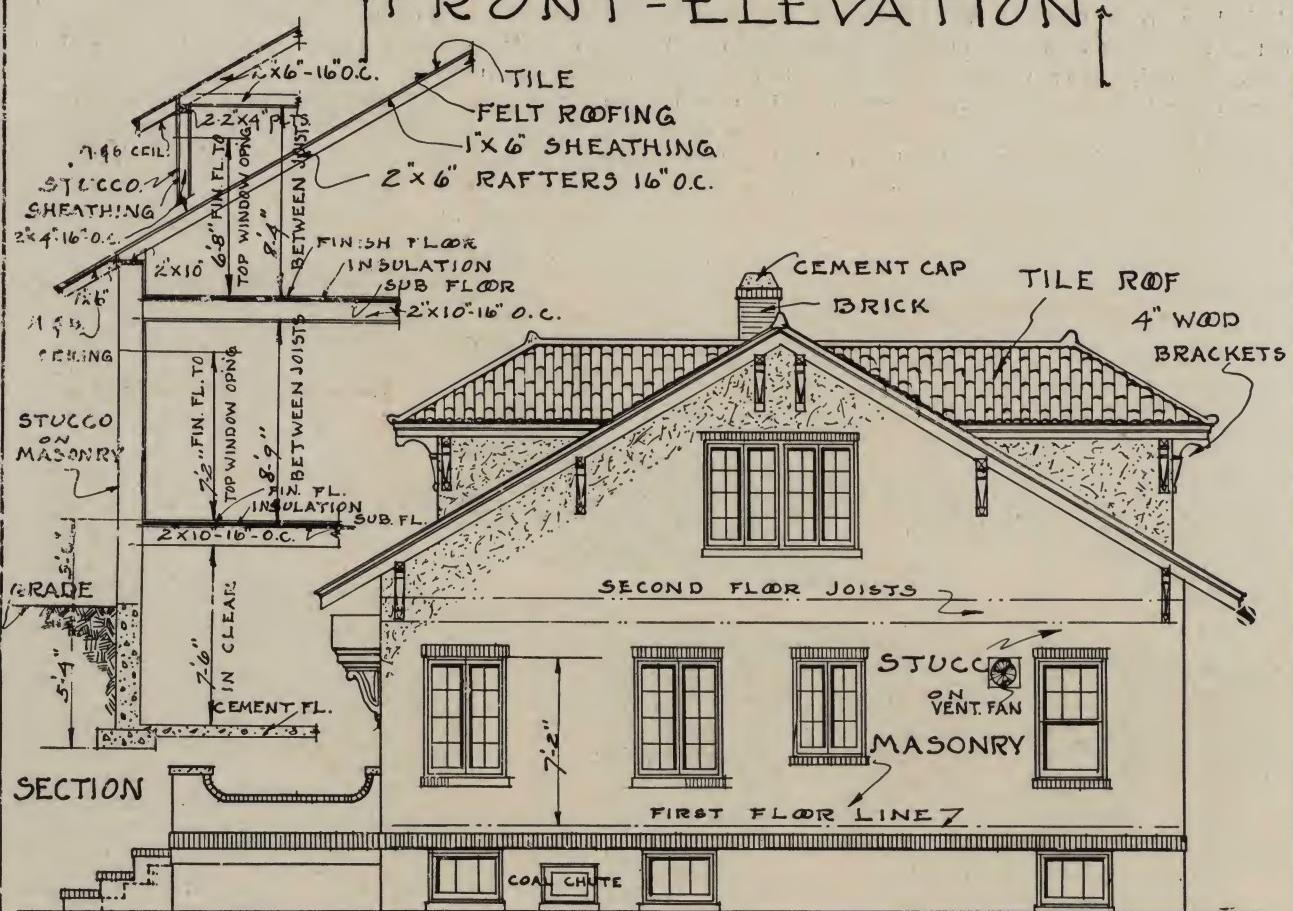
The painting on page 130, reproduced in full colors, shows us the added beauty of this home resulting from good color treatment. On the four pages which follow this will be found a series of drawings which show the excellent arrangements of rooms, elevations, and full details of construction. In studying these plans it is especially worth while to note the many items of equipment such as the built-in mail box, the kitchen ventilating fan, and the arrangement of the basement with separate laundry, fuel and furnace spaces. It is the attention to these points which makes a house modern and desirable, increases its living comfort and gives it a greater resale value in case the owner may wish to dispose of it at some future time.



**THE ANTLERS:** A White Christmas Was the Order of the Day When This Photograph of "THE ANTLERS" Was Made and the Snow Not Only Forms a Becoming Mantle, but, Unmelted on the Roof, Proves the Worth of the Insulation Indicated in the Plans Shown on the Four Pages Which Follow.



FRONT-ELEVATION

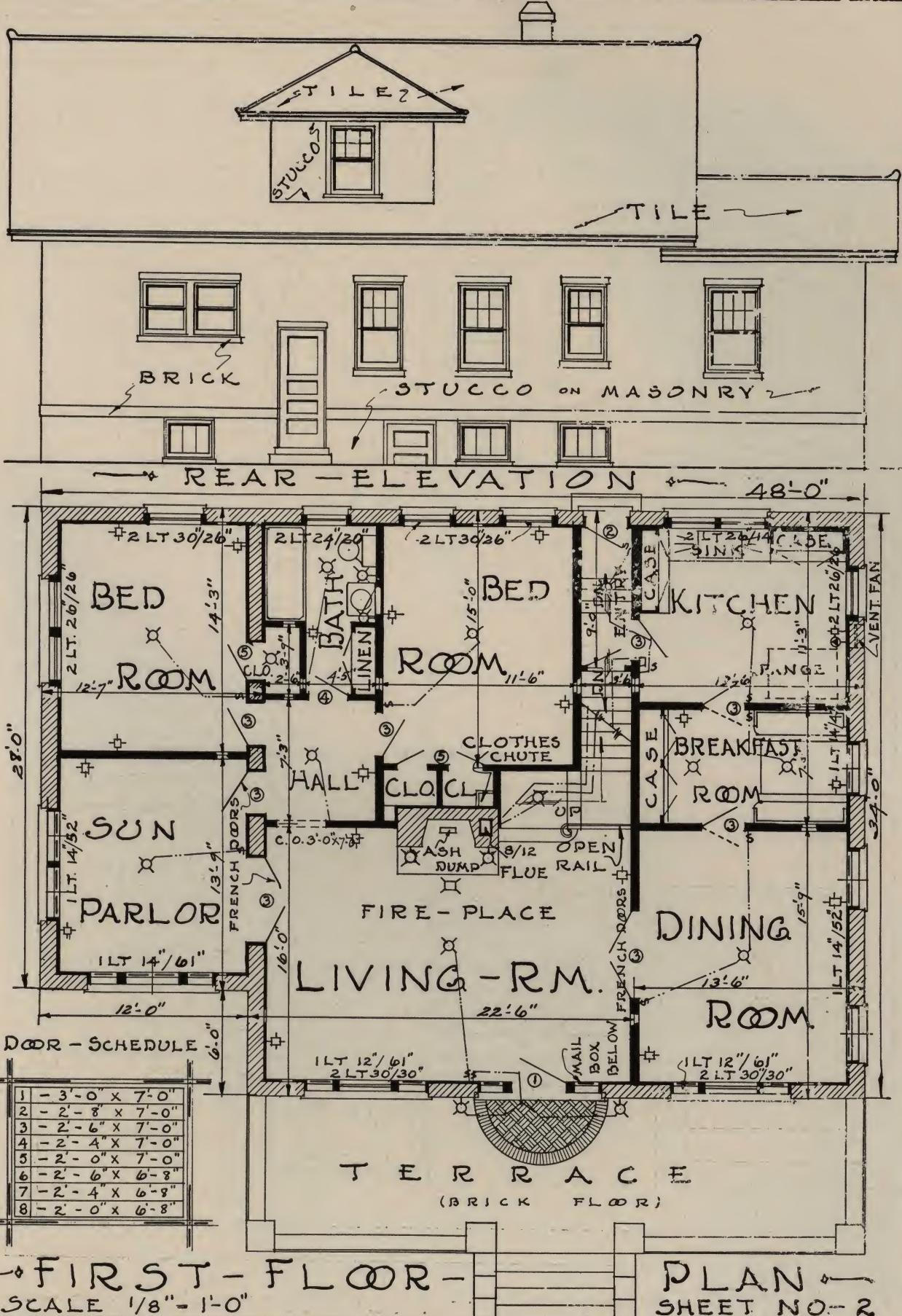


RIGHT-SIDE-ELEVATION

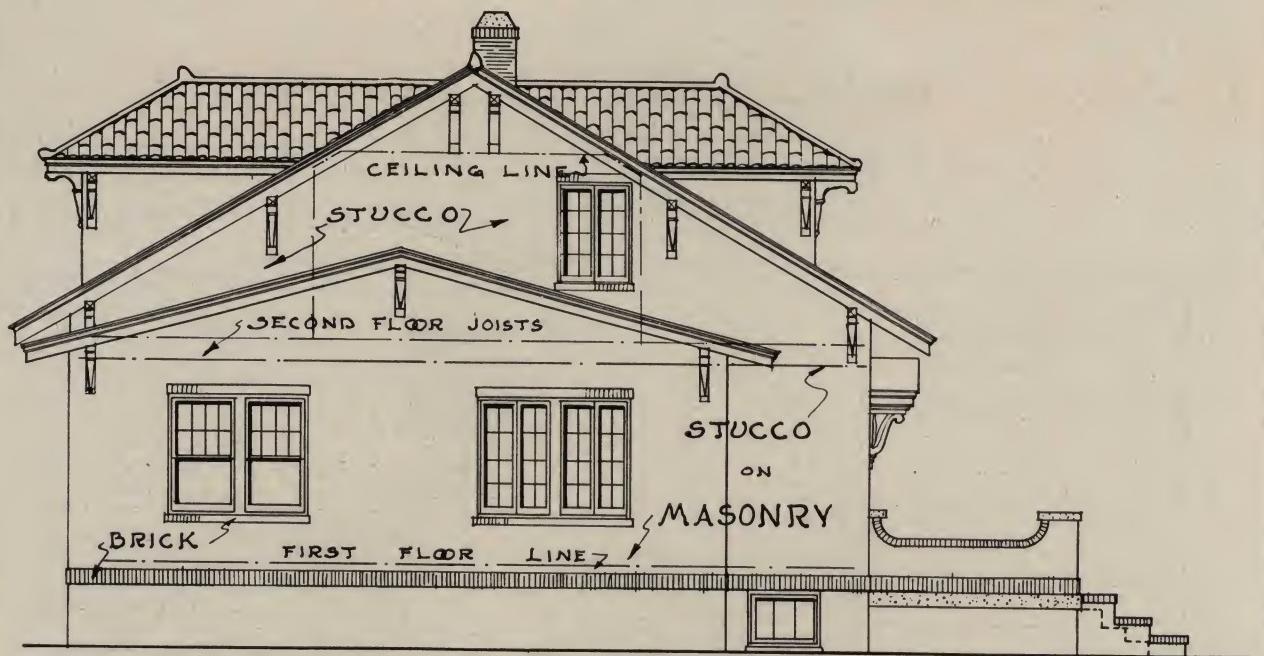
SCALE  $\frac{1}{8}$ " = 1'-0"

SHEET NO.-1

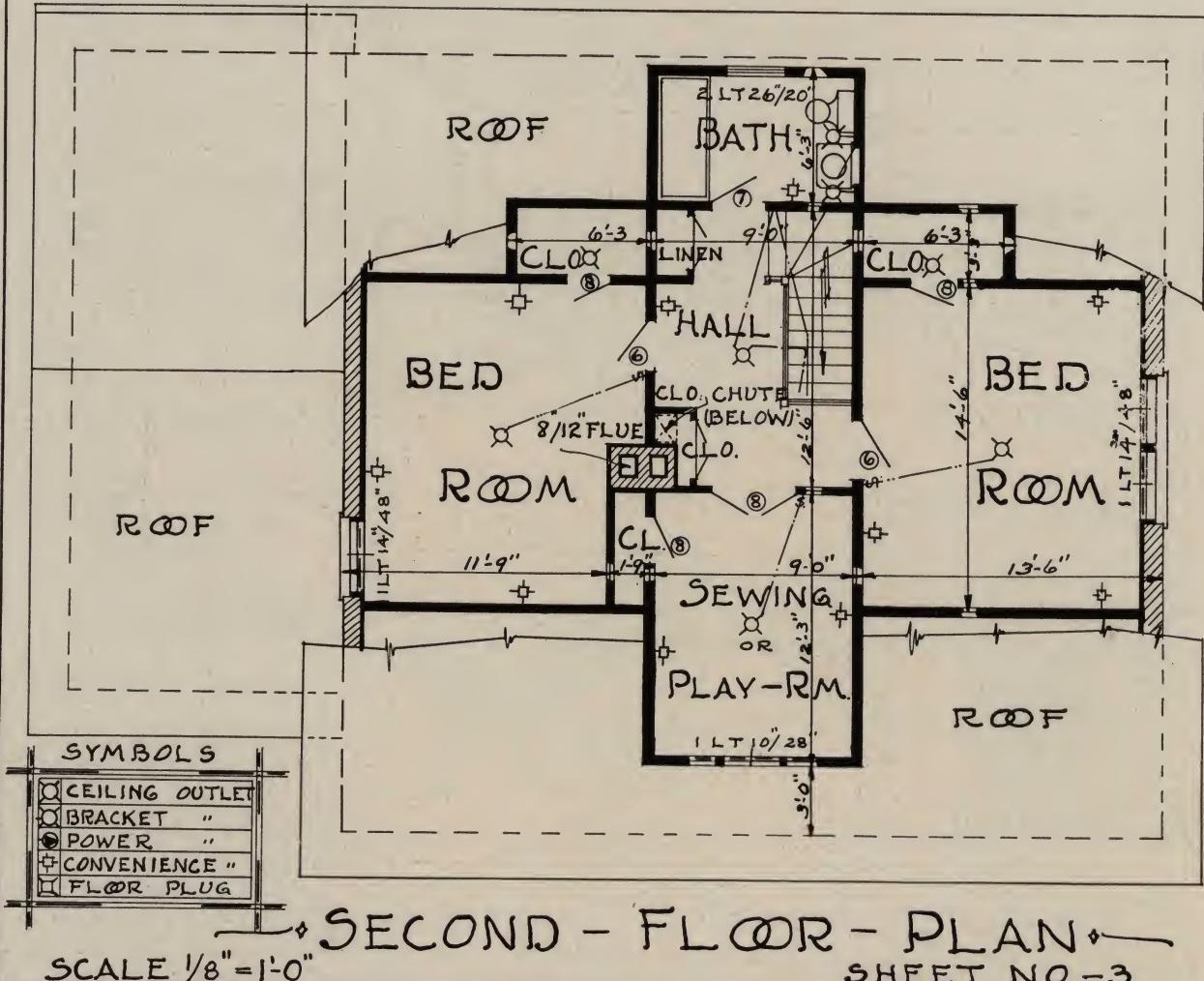
THE ANTLERS: Though Hidden by the Newly Fallen Snow When Photographed, the Roof of This Home Is Here Revealed as Being of Tile and These Drawings Also Indicate the Wall and Roof Construction and Built-in Specialties.



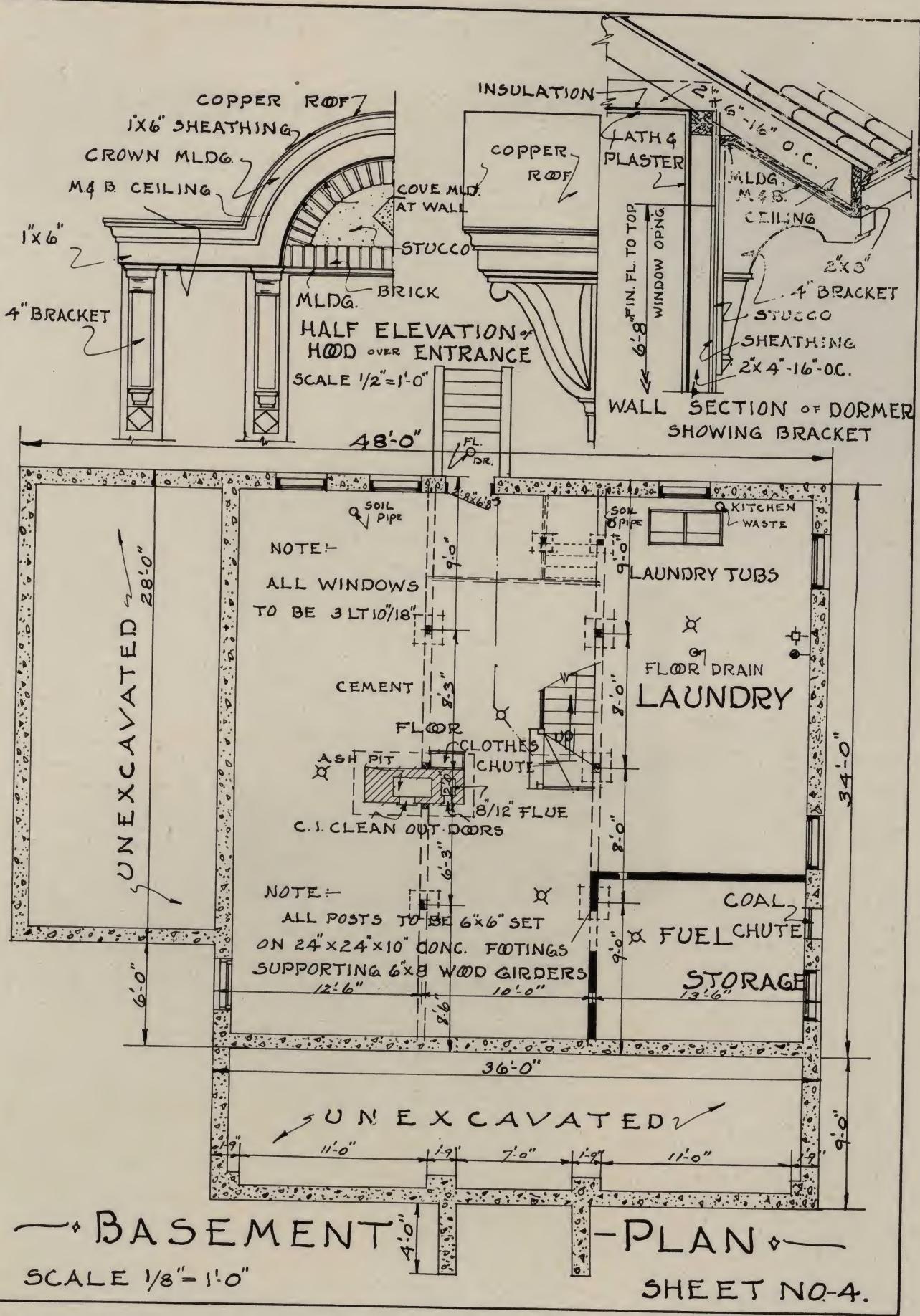
**THE ANTLERS:** The Rear Elevation Is More Simple Than Those on the Preceding Page but the Floor Plan Offers a Multitude of Details in Addition to Displaying the Excellent Arrangement of Rooms. Other details on the pages which follow.



LEFT - SIDE - ELEVATION



**THE ANTLERS:** Here We See the Second Floor Plan. These rooms may be left unfinished, to save immediate expense, and later they may be finished off to add extra accommodations to those on the first floor.



**THE ANTLERS:** At the Top of This Page Are Details of the Entrance and Dormer, While Below We Find a Basement Plan Providing a Clean Laundry Space and a Fuel Storage Room Which Confines the Coal Dirt to the Place Where It Belongs.

# Home Adequately Wired for Labor-Doing Appliances

OME builders are inclined to conclude that there is little connection between the increased sale of houses and such apparently inconspicuous improvements as adequate wiring for electric service. Is this a fact? If you were the owner of an automobile which was made in 1920 would you value it as highly as a new model just put on the market with numerous additional desirable improvements, inconspicuous perhaps, but making the car a better buy once the advantages were known to the public?

Now, likewise, the builder should put himself in the position of a home owner. Try to put yourself in the place of a woman living in one of your houses which is equipped with electrical wiring of standards which were adequate several decades ago. You have just returned from a visit to the home of Mrs. Smart. You have heard that her home is very up-to-date, but you never expected that in comparison your own home would be so far behind the times.

The first superiority of the house you have visited was the lighting. As a woman you would have marvelled at the charming lamps and fixtures everywhere creating delightful studies in lighting throughout the house. You incidentally remarked that there were no ugly makeshifts of wires running to overhead fixtures. Each portable lamp had its own outlet nearby. Mrs. Smart was a firm believer in modern improvements. Electric labor-saving devices were installed to take the burdens of housekeeping from her shoulders which gave her a real command over her household details.

The laundry was spick and span, very business-like looking. The efficient washer and ironer installed seemed to challenge the heaviest laundry demands which might be made on them.

The kitchen was a dream. In the first place it was well lighted and there was an electric range and a built-in dishwasher which solved your wonderment as to how Mrs. Smart managed to keep her hands in such good condition. You expected to find an electric refrigerator and you were not disappointed. It was in the pantry chilling the food with a dry hygienic cold which eliminated the mess incidental to ice and the everlasting watchfulness which is an essential part of an older method of refrigeration.

But it would be too long a story to relate in detail how a home which is adequately wired for electric service outranks one which, from the outside perhaps, appears to be equally modern and attractive. The housewife who has

been put through such an experience feels that she has been cheated in the purchase of her home because it will never fully compare with the one which has been initially adequately wired for the convenient use of electric service.

With this picture in mind don't you think that there should be something done to assure future buyers that the home they are purchasing from you will be adequately wired? That "something can best be accomplished by means of the Red Seal Plan which has been inaugurated by the electrical interests in most leading cities.

The Red Seal is the mark of identification of service performed in behalf of public interest. This service consists of the establishment and maintenance of a standard of adequacy in the installation of wiring and other equipment designed to facilitate the use of electric appliances now available as they are developed and improved, from time to time, in the progress of electrical science and invention. The Red Seal Plan does not identify the wiring job or the materials used or the man who did the work. It identifies the house that has been wired according to the standard established by the local Red Seal specifications.

Electrically operated appliances have been invented and improved over a long period of time and every year sees new developments in the domestic electrical appliance field. It has been repeated time and again

that the average small home owner has more servants at her command than formerly were found in the homes of the wealthy.

For instance, electricity has lightened the burdens of washing, ironing, cleaning, cooking and dishwashing. It makes it possible to ventilate the home in the hottest weather at a trifling cost. In damp and chilly weather it can be depended on to throw out warm electric rays from portable heaters which operate without dirt or trouble —by the turn of a switch.

Consider the important subject of refrigeration. It is a well-known scientific fact that foods rapidly deteriorate if they are not kept at a temperature of between 40 and 50 degrees. Moreover this temperature must not vary greatly as rising temperatures permit the rapid multiplication of bacteria. Electrical refrigeration has proved very capable of keeping foods at such temperatures. Foods may be left in the cooling receptacle for days and will be found fresh as when placed within. Surely a home to be considered strictly modern must provide for the introduction



The Completely Electrified Kitchen and Laundry Are Places Which No Longer Mean Drudgery for the Housekeeper. They are spick and span and entirely businesslike.

of electrical refrigeration, this latest scientific contribution to home-making. Adequate wiring alone can provide this.

Electric cookery is another improvement in domestic progress which is increasing in popularity. There are thousands of communities whose low cooking rates make it possible for the householder to utilize electricity for this purpose at a very reasonable cost. Special wiring is provided for the electric range. This, very patently, can best be done while the house is being erected as later additions to the electric service are both costly and inconvenient.

But there are one hundred and one various useful electric appliances, from table cooking devices which permit the housewife to prepare a full meal at the table to the health-giving electric devices which are now being found in many modern homes. A woman who has used an electric vibrator for certain ailments, the electric curling iron, or the hair dryer after a shampoo, will expect to find adequate provisions in the new home she is inspecting, which will make it possible for a continuance of the use of these devices.

The modern laundry is electrically equipped. There are a great many types of electrical clothes washers on the market and millions of homes find them a great aid in lessening wash-day burdens. The electric iron and ironer are also found in up-to-date homes. Built-in dishwashers will catch the eye of a future home buyer as an evidence of progressiveness on the part of the builder. All these appliances to be truly convenient must have adequate convenience outlets available nearby. Makeshift connections to lighting outlets only spell trouble and criticism of the house and its electrical planning.

The builder will find a gratifying sense of receptivity on the part of the home buyer when he explains the electric service possibilities of Red Seal wiring. It will not take long for him to sense the fact that the home wired according to Red Seal specifications is the answer to the housewife's questions regarding the utilization of the mar-



**With Electricity in the Home the Family Sewing Can Be Done Easily and Quickly with the Aid of an Electric Sewing Machine.**

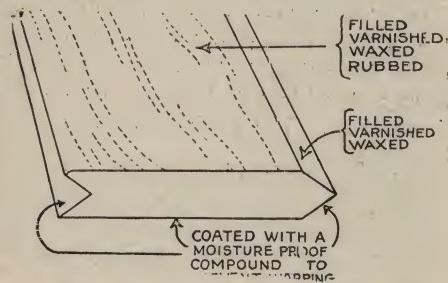
velous products of electrical invention which have been so extensively advertised.

All women living in Red Seal homes which provide adequate facilities such as convenience outlets, lighting outlets, switches, spare circuits, and other essentials for the convenient use of electric service are really "wired up" for the fullest realization of their dreams of comfort, beauty, and freedom from the incessant drudgery of house-keeping.

#### Oak Flooring Improved

**T**HREE is one well-known brand of oak flooring which is furnished in a ready finished condition so that it may be laid and used immediately. The finish is applied by patented machines, the only ones of their kind known, and this machine finishing means a considerable saving of time in laying of the floors and economy in the cost of finishing.

The upper surface of this flooring is filled, varnished, waxed and rubbed, the upper side of the wedge-shaped tongue is filled, varnished and waxed. The under side of the wedge-shaped tongue, the under surface and the groove are all coated with a moisture proof compound to prevent warping. Formerly the groove was filled, varnished and waxed. The change in treatment appears like a minor technical detail but is in reality of importance because of the increased protection it gives against warping and therefore against unsightly or ruined floors.



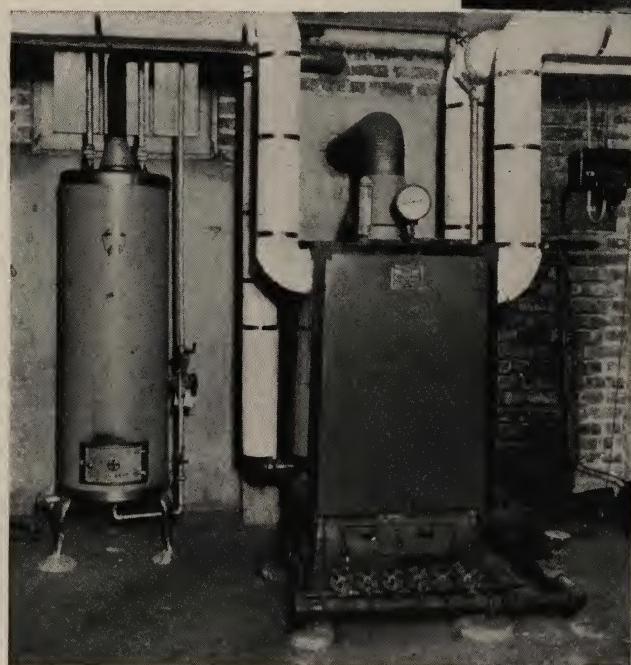
**This Sketch Shows How the Ready Finished Flooring Is Treated to Prevent Warping.**



**Well Prepared, Warm Breakfasts Are Possible with Little Effort Where Electric Equipment Is Provided in the Dining Room.**

# New Uses for the Basement with Gas or Oil Heat

THE possibilities of the basement for added recreational or living comfort have only been fully realized with the advent of gas and oil burning heating plants. On extremely hot days, a clean, well ventilated basement is a delightfully cool retreat and a basement dining room would be a great advantage if the kitchen and food supplies were conveniently accessible. Basement space is more often used for billiard rooms, workshops, offices or "dens," lounging rooms, sewing rooms or children's play rooms. One of the pictures on this page shows basement space being used for living and bedrooms. Another shows a kiddies' play room, where the children can have all the fun



Gas Fired Boiler and Automatic Hot Water Supply Conserve Basement Space and Provide Heat Without Dirt or Dust.

and make all the noise they want.

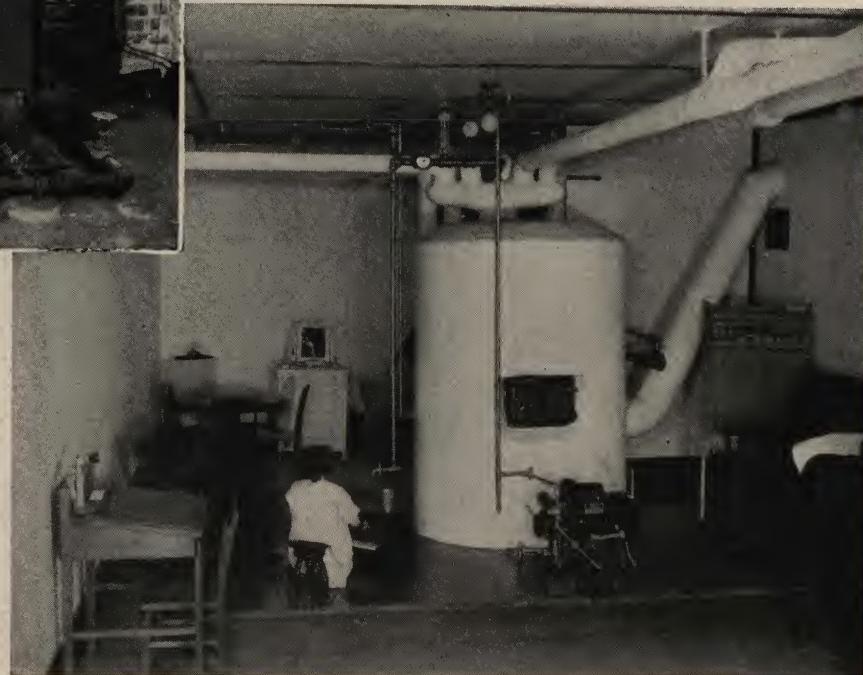
One householder in a large residence heated by gas went so far as to install costly decorations in his spacious basement and celebrated the event with a dance there. The affair was voted a huge success.

It is essential that oil or gas burning heating plants be thoroughly insulated, so that the basement rooms may not be overheated but have a well distributed warmth.

The ordinary, well made concrete floor is sufficient for some basement

A Clean, Comfortable Basement Fitted Up for Living and Bed Rooms. The heating plant with automatic oil burner and the hot water heater show at the left of the picture.

uses, but, if the space is to be used the year round, it is feasible to cement down linoleum. Wallboard, or plaster board nailed to the underside of the first floor joists will provide an attractive ceiling when properly painted or decorated.



Here Is an Ideal Children's Play Room in the Basement of a House Heated by a Warm Air Furnace. The oil burner which banished the coal bin shows in the foreground.

# The Armstrong

## A Model Brick House in Rustic Style

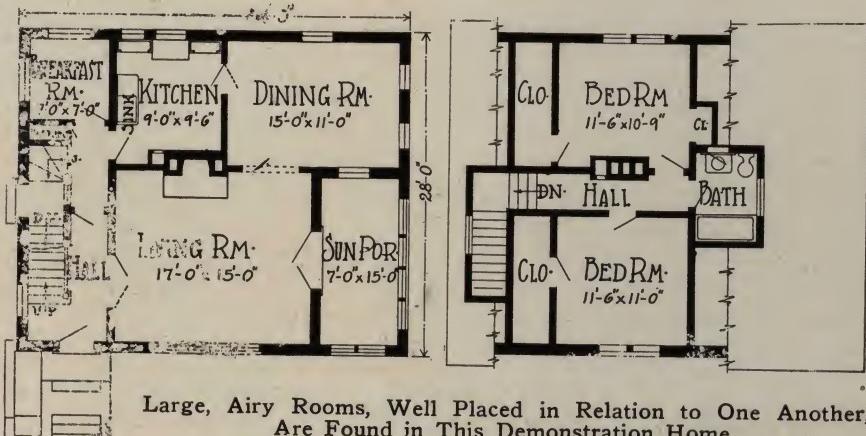
**O**F special appeal to those whose fancy turns to the rustic is the brick house pictured below. The irregularity of the outer brick surface and the graceful sloping roof possess a charm all of their own. The brick used in the exterior construction is of the rustic cream colored type. Dormers, of which there are two, are of stucco. The trim roof is of composition giant shingles, asphalt saturated felt with green slate. The walls and roofs are thoroughly insulated. The interior is plastered over metal lath which is assembled on the inner brick surface. This method forms an air space which provides additional insulation for walls.

The house has a frontage of 34 feet and a depth of 28 feet. It is equipped with a full cellar and two complete floors. Interior woodwork is of spruce, enameled, with doors of birch.

While the dimensions of the house are conservative it will be seen from the plans of the two floors that large airy rooms are the keynote of the plan. Ideal placing of the rooms in proper relations is another feature found in

this house. The same idea of planning is carried out on the second floor.

The home was built by the Cook & Brown Lime Company, of Oshkosh, as a model brick home to demonstrate the artistic appeal that can be found in rough brick. It was built at an estimated cost of \$11,000. Auler and Jensen, Oshkosh, were the architects.



Large, Airy Rooms, Well Placed in Relation to One Another, Are Found in This Demonstration Home.



**THE ARMSTRONG:** The Rough Textured Walls of Cream Colored Brick Give a Rustic Tone to This Home While with the Sweeping Roof Lines and Shuttered Windows It Possesses Unquestionable Individuality and Charm.

# Gypsum and Wood Prove Fire Resisting

**A**N accidental but unusually effective demonstration of the hitherto little known fact that a frame house can be virtually as fire resistant as one of brick construction occurred recently in Highland Park, Illinois.

A completed frame house, which was as yet unoccupied, caught fire inside in some unexplained manner, and before fire apparatus could arrive at the scene, the flames had made a furnace of the interior and had ruined floors and partitions.

The exterior of the structure was unharmed, however, and the casual observer could not tell that there had been a fire except by the smoke stains on the windows and by the fact that the windows had been broken out by the intense heat.

This apparent miracle of a wood house in which fire will not spread from the inside out, nor from the outside in, was due to the peculiar construction of the building. Mr. Walter Wilcox, who built the house and four others in a group with the intention of offering them to the general public for sale, had the walls and upper ceilings of the house insulated with a mineral insulation, primarily for the purpose of soundproofing and reducing heat loss. This



After the Fire—Note that the Exterior Is Undamaged Although the Inside Was Burned Out Clean. Gypsum filling between the studs stopped the fire.

(Continued to page 142)



After the Fire—Inside Partitions and Outside Wall Lining Completely Burned; Edges of Studs Charred; Gypsum Insulation, Which Stopped the Fire, Still in Place.

# Trimming the House in Stone

**N**OT to the man who can sell the public what it wants is the most credit due, but to the man who can sell the public what it does not want—provided, of course, that the substitute benefits the buyer. It does not take much effort to induce a man to buy that which he has already determined to own; but it requires tact to change a man's mind and leave him satisfied.

In the building field, where absolute satisfaction is difficult to attain at any time, certainly the man who can turn aside from the beaten paths and still leave in his wake a line of satisfied customers, deserves recognition.

Such a man is Robert McGarraugh, of San Antonio, Texas.

When Mr. McGarraugh first began building homes, not so long ago, the first thing he attempted to do was to find out what the people want. He learned that people in general admire stone houses, with a preference, transmitted, perhaps, from our cave-dwelling and cliff-dwelling ancestors. There is something alluring about a house built of stones dug from the ground. The exterior blends with the most aesthetic gardening, lends itself to the most unusual architecture. The rustic lines of the stone house, and its earthy colors appeal to the eye; its naivety intrigues the imagination. In such a house, one fancies it would be easy to lead the simple life, to be different, less conventional, closer to nature, as it were.

Having found out what the people prefer, it would seem that Mr. McGarraugh's

problem was solved. Not so. One must remember that building with any material is not the simple process it was in the Stone Age. The very nature of the modern home demands that it be built of a material possessing durability, permanency of color, strength and toughness. And not all



An Effective Combination of Chimney and Peaked Entrance of Stone Which Has Proved to Be Very Popular with Home Builders.



Another Popular Design Is the Porch Enclosure with Adjoining Chimney of Rough Stone.

stones possess these qualities. So susceptible are stones to climatic conditions, so unreliable are they as to texture, that the wise builder has learned to apply four tests; namely: (1) resistance to crushing, (2) the acid test, (3) absorption test, (4) microscopical examination.

Aside from the severity of these tests there is the scarcity of the material to be contended with. Even sandstones and limestones, the two most popular building stones, while fairly abundant in some portions of the United States, are not widely distributed.

Admitting the limitations of his clientele, and at the same time recognizing their preferences, Mr. McGarraugh asked himself a question: If one cannot have a house built entirely of stone, why not have a house trimmed in stone?

Rocks are not quarried to any great extent in the vicinity of San Antonio, but in the stream beds near the town are various deposits of cobblestones. These stones gave Mr. McGarraugh his idea.

With nothing except his own convictions and dreams to guide him, Mr. McGarraugh began to design the small houses, decorated in stone, that have made him one of the most popular builders in his section.

"The stones I use," Mr. McGarraugh explained, "would not be suitable for the body of the house; but for decorative purposes they are the very thing. For this purpose, the quality of the stone does not make much difference, but natural stones are much more attractive than artificial stones. In using rocks for decoration, the main thing is to place them in the right place so as to get a harmonious effect."

This is the secret of Mr. McGarraugh's success: har-



Here the Entrance Border, Porch Enclosure and Curbing Are All of the Same Style of Stone Masonry.

mony. But while being careful to preserve harmony he manages to also obtain individuality. His touches of stone are never alike in any two houses. Sometimes the little peaked entrance, found in many of his houses, is entirely of stone; the chimney is nearly always of rock; sometimes the porch has a little rock enclosure; quite often there is a facing of stone around the door; maybe it is only a flagstone walk, or a stone curbing, or a bit of stone sprinkled over the face of stucco—but whatever the touch, the effect is harmonious and individual.



## Gypsum and Wood Prove Fire Resisting

(Continued from page 140)

expanded gypsum insulation, Insulex by name, was poured between studs and upper ceiling joists to their full thickness, making the house a veritable hollow gypsum box, with only the narrow edges of the 2 by 4s exposed.

The builder, to achieve the decorative effect he desired, had a fibre insulation wallboard laid over the Insulexed walls and covered with a plastic paint.

When the fire broke out inside the house, this wallboard was burned completely off the walls, but the flames stopped when they reached the gypsum insulation. After the fire was put out the house looked almost as it had appeared before the wallboard had been put on the walls—the wall studding and upper ceiling joists were still in good condition, and between them the gypsum insulation was still in place, just as



Even with a Small Cottage a Curbing of Rough Stone or Boulders Can Be Used to Very Good Purpose.

it had been installed. The partitions were consumed and the floors burned. The roof rafters were not touched by the fire.

In only one place had the fire broken through to the outside, and that was in one corner where workmen had carelessly failed to fill up between the studding with the gypsum insulation. Here the flames ate through, proving that it was due only to the insulation that they had not broken through at other spots.

The company manufacturing the insulation had claimed for it that it would make a wood house fire resisting, but the claims had been based only on tests made in the laboratory. The accidental fire in Highland Park served as a practical and unexpected confirmation of the results of the laboratory tests.

When Properly Handled, as Seen at the Left, a Smattering of Stone on the Stucco Walls Gives an Attractive Effect.

# The Ashtabula

## A Home of Stucco, Tile and Brick

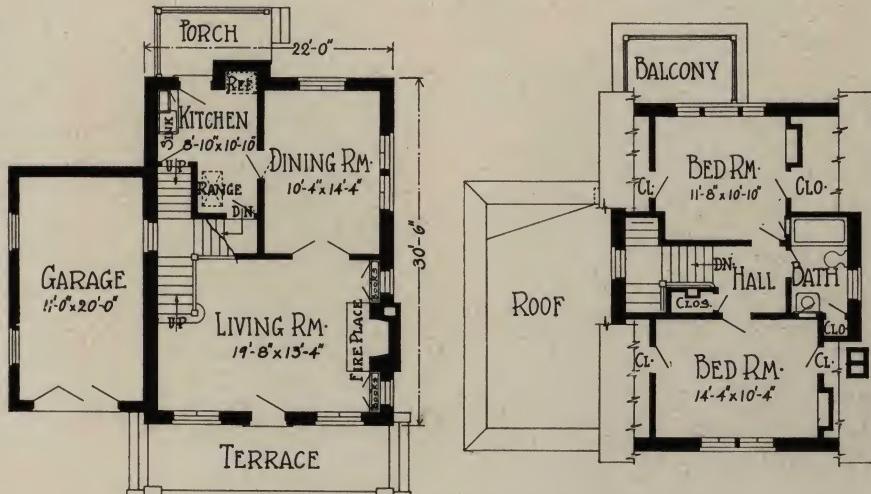
**T**HE compactly arranged home of five rooms, shown in the accompanying layout, is of the English type. It contains a living room, dining room, kitchen, two bedrooms, more than the usual amount of closet space and the garage is attached.

Within the living room one is struck by the artistic effect of the fireplace, built at one end, with bookcases on either side. One corner of the room is broken by the stairway leading to the second floor. The portion exposed to view is a pleasing design but a greater part of the staircase is obscured from view and is of a nominal cost in construction.

One corner of the dining room is broken with a case used as an enclosure for the radiator. The kitchen is compact but amply large for the gas stove or range, provided with a cabinet and sink. The space set apart for the ice box may be changed for another closet if desired.

Two bedrooms and the bath are found on the upper floor. Each bedroom has two closets, another being

located in the hallway and a linen closet is provided in the bathroom. A shallow closet has been designed in the wall between the rear bedroom and bathroom. It may be used for storage of medicine or other purposes.



Five Compactly Arranged Rooms Are Available in This Home Where the Space Has Been Used to the Last Inch.



**THE ASHTABULA:** Plain Stucco Walls Set Off by a Tile Roof, a Fascinating Balcony, Attractive Casement Windows and a Chimney Dotted with Brick Makes a Most Pleasing Small Home; and the Garage is a Balanced Part of the House Proper.

# The Atwell

A Contractor's Model Home—"Pondosa Pine Cottage"



**THE ATWELL:** This Model Cottage Crowns a Rocky Ledge Overlooking the City of Portland, Oregon. Built of stone, stucco and hand dressed native pine, with a four toned roof of hand split shingles it is expressive of the pioneer spirit of the West.

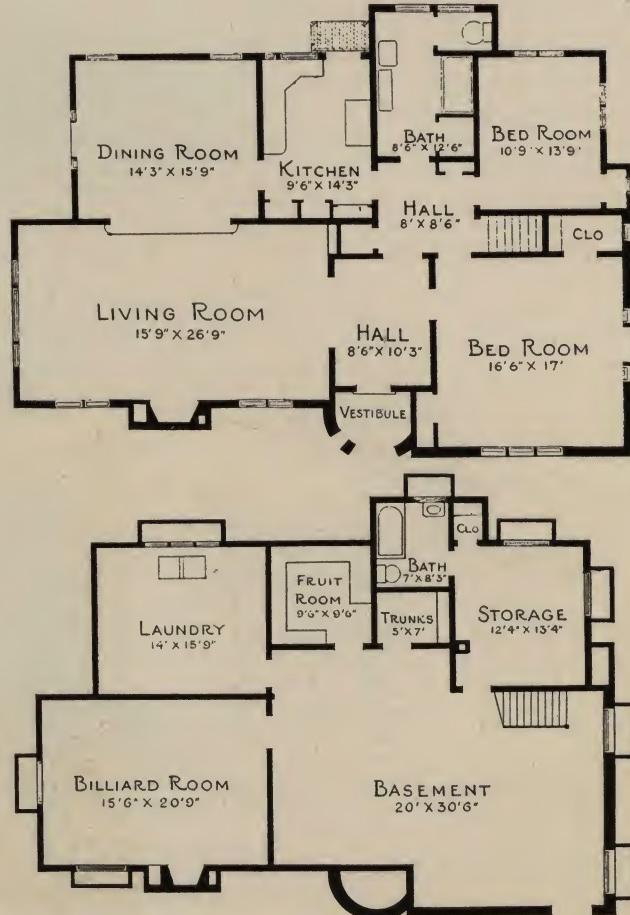
CROWNING the peak of a hill that dominates the bustling business section of Portland, Oregon, only a few moments removed by motor, is a new and splendid home designed by architects who have dug deep into their years of travel experience to create an English type cottage with touches chosen from the most picturesque of foreign types.

It is the Western Pine Manufacturers' Association model dwelling, Pondosa Pine Cottage, built and occupied by a prominent Portland contractor as his home, but dedicated by its builders as a thoroughly modern laboratory where the benefits of Pondosa Pine can be strikingly set forth, and its behavior under actual conditions of use accurately observed and checked as well.

Rough dressed bungalow siding of Pondosa Pine enters into the wall construction, mingled with just sufficient native lava rock and stucco to make a harmonious building strictly in keeping with its rugged, picturesque setting. It is only when one enters the cottage, with its hand-hewn beams and plank doors, that the full significance of its creation is realized. And this studied restraint in the use of a dominant material, for the sake of architectural charm, alone is sufficient to impress the visitor with the unusual character of this undertaking.

As one enters the small front gate that is hinged to the turret of an attractive street-level garage, he climbs up a winding pathway of undressed native flagstones, past a spring-fed pool where lilies nod, and comes face to face with the baronial entrance to the cottage. Faithfully designed in the style of an early English period when the Norman influence still was strongly felt, its turreted boulder walls and impressively mounted door of solid slabs seem to bid defiance to the elements and the enemies of its master.

Passing into the entrance hall, the visitor notes that an almost monastic severity marks its treatment. From the floor of hand-made quarry tile, to the vaulted ceiling with



This Would Normally Be Called a Five-Room House but the Often Neglected Basement Space Has Been Used to Afford Additional Rooms.



**A High Chapeled Ceiling, Wood Paneled and with Massive, Hand-Hewn Beams, the Pegged Construction Can Here Be Seen and This Style Prevails Throughout the House; Very Few Nails Being Used in the Construction.**

its rough trowel finish, this hallway is in complete accord with the medieval English motif set by the grilled entrance door fashioned from heavy planks of Ponderosa Pine. Set over the doorway is an old English sheep bell, fastened to a hand-wrought iron frame.

To the left, from the entrance hall, one steps into a 16 by 27-foot living room, the ceiling of which is chapeled 16 feet high, supported by hand-hewn larch beams and covered solid with Ponderosa Pine. The floor is of wide, crude oak planking, mortised and pegged with ledge cracks between each board. The building throughout is mortised and pegged, with but very few nails used in its construction.

From the living room, a short flight of two steps leads into the dining room with its slate tile floor. Here the side walls are of texture plaster, with the end walls of full-paneled Ponderosa Pine. Carrying out the rugged motif of the entrance proper, an electric fixture of hand-wrought iron depends from the center of this ceiling, which has two heavy, hand-hewn larch beams through the middle and half hand-hewn beams at either end.

Stepping out of the dining room, the visitor enters into a special view terrace, from which is to be had a compelling panorama of the entire city of Portland.

Directly down below the bystander's feet loom the tall business buildings of a hustling metropolis, glistening white in the sunlight. As the vision lengthens, one traces the winding path of the Willamette River, while out against the blue of the sky Mt. St. Helens and the famed Mt. Hood rear their jagged, snow-capped, sentinel peaks, and directly in the foreground gleams the snow white tip of Mt. Adams.

Passing again into the house, one inspects a model kitchen finished in white enamel over Ponderosa Pine, and equipped with

every electrical convenience as well as unusually ample cupboard space. Here the way now leads into a spacious back hall that connects with an inviting bath and two restfully finished bedrooms, before descending a flight of steps into the partitioned basement.

This space, often neglected in the planning of even far more pretentious dwellings, is usefully and attractively divided by partitions of painted Ponderosa Pine into a maid's bedroom, bathroom, fruit room, trunk room, laundry room, furnace room and a large billiard room, with convenient hallways leading to all divisions. The entire downstairs is completely ceiled with Ponderosa Pine; the billiard room is heavy beam ceiled to correspond with the massive, rustic fireplace built of large clinker brick, and its floor is of inlaid tile linoleum, over cement. From the basement, a tunnel leads on a slight grade down through the double garage to the street.

Plans for this model cottage were prepared by Lucius & Cash, with the Matot Construction Company in charge of the actual building operations. The cost was held rigidly within range of the average home owner in order that he might be able to take full advantage of the many exceptional features in this model home without undue strain on his proposed budget for building.



### Things Drivers Don't Like

It is almost impossible to get a good driver to work with poor, run-down or dirty equipment. Good, clean trucks attract the same kind of drivers. Install a systematic method of keeping your vehicles clean and in good condition and you will inspire cleanliness and interest on the part of your driver force.

Drivers don't like to be changed from one truck to another, they prefer to drive one truck steadily, then they will take more interest in their job and will take better care of the truck.



**Partitions of Painted Ponderosa Pine Combined with Full-Boarded Ceiling, Make the Basement Attractive and Add Its Valuable Space to this Useful Portion of the House.**

# The Augusta

## A Builder's Own Home



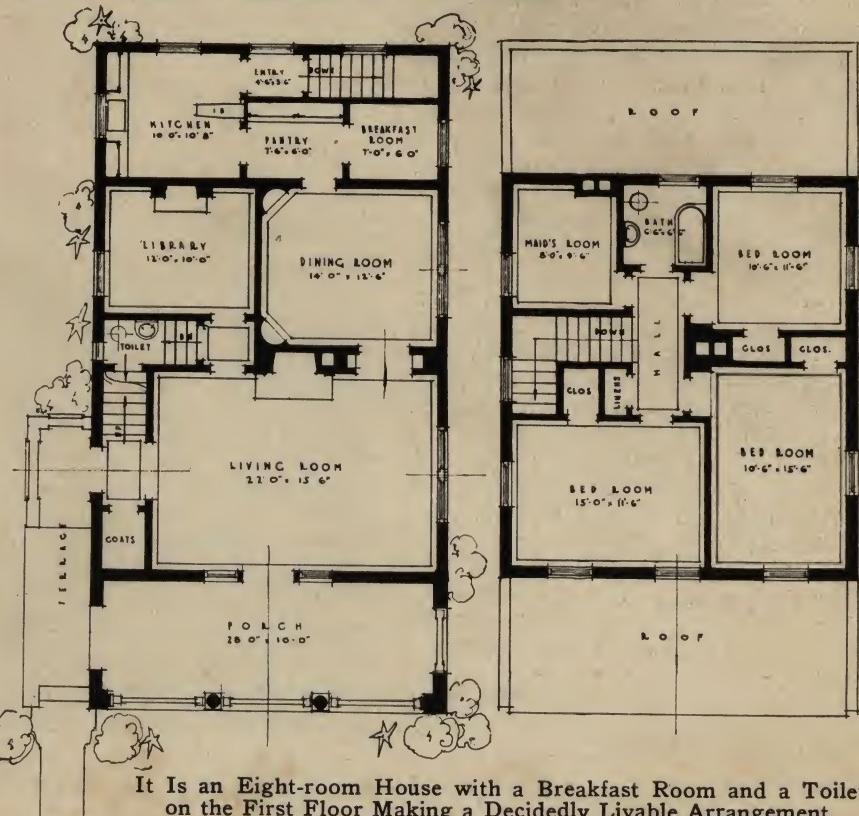
**THE AUGUSTA:** When the Home Builder Plans and Builds His Own Home We Naturally Expect to See Something Particularly Attractive and Here Is an Example in the Residence of W. Lewis Smith, of Johnson City, Tenn.

**W.** LEWIS SMITH, a widely known builder of Johnson City, Tennessee, recently constructed an interesting eight-room house for his own occupancy, choosing masonry construction with insulated tile roof, as a means of protection against extremes of temperature.

The photograph shows the building as it appeared after completion. The outside bearing walls and principal partition walls are of standard 8 by 6 by 16-inch concrete blocks with plain flat surfaces to receive stucco. The stucco was made of white portland cement and white sand tinted slightly with yellow oxide, giving the finish coat a beautiful light buff tone. The outer walls are all furred and lathed for the plaster, which, however, is applied direct to blocks forming interior bearing and partition walls. Floors are of joist construction.

The room arrangement is rather novel for the community in which the house is located but it is easily recognized as a good, livable plan. Advantage is taken of the hillside location for a garage in the basement, located directly below the kitchen. The spacious front porch, 28 feet by 10 feet, is an interesting and pleasing feature which gives the house a decided southern touch. The roof is of red Spanish

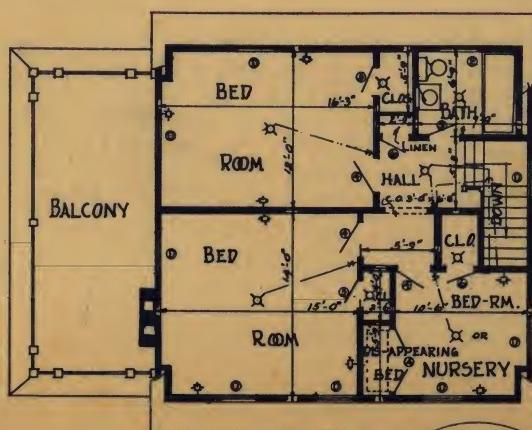
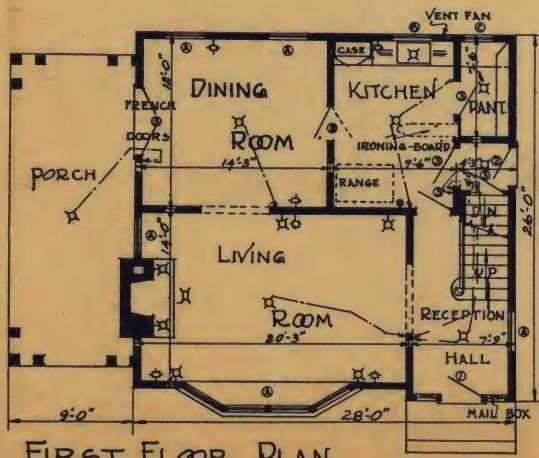
concrete tile. The residence was designed by Coile and Cardwell, architects, Johnson City, Tenn., and built under the supervision of J. W. Warren.



It Is an Eight-room House with a Breakfast Room and a Toilet on the First Floor Making a Decidedly Livable Arrangement.

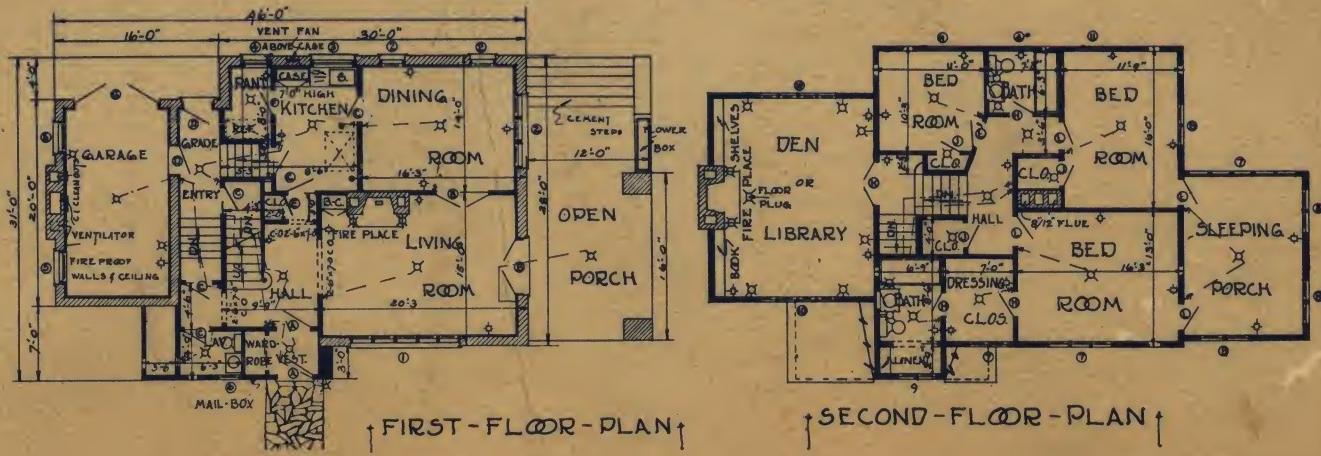


*The ALMIRA*





*The ALLEGANY*



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